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Development and Initial Application of a Rorschach Content Scoring System

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DEVELOPMENT AND INITIAL APPLICATION OF A RORSCHACH CONTENT SCORING SYSTEM

by

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VITA

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TABLE OF CONTENTS

Page

ACKNOWLEDGEMENTS ii

VITA iii

LIST OF TABLES vi

Chapter

I. INTRODUCTION 1

II. REVIEW OF THE LITERATURE 6

III. METHOD 47

Subjects 47
Procedure 48

IV. RESULTS 54

V. DISCUSSION 76

VI. SUMMARY 90

REFERENCES 95

Appendix

A. RORSCHACH CONTENT SCORING SYSTEM 103

B. FREQUENCY OF RORSCHACH CONTENT VARIABLES . . . 143

LIST OF TABLES

Table Page

1. Frequently Occurring Rorschach Content Variables 55

2. Categories that Differentiate Among Groups 62

CHAPTER I

INTRODUCTION

Over the past thirty years, substantial research has been conducted about a widely used personality technique, the Rorschach Test. A significant portion of relevant studies has investigated the occurrence and significance of responses elicited by the test stimuli. This research has addressed a wide range of response characteristics, including perceptual factors, the use of color, form, location and shading, and the understanding of content choice in test performance. In addition, a number of studies have focussed on the development or application of scales which use a number of different response attributes as measures of specific personality traits or dynamics.

During early research, emphasis was on formal characteristics of responses. However, during the last ten years, interest in Rorschach content has increased. Recent research has generally approached investigation of content from several perspectives: establishment of normative data; development and application of scales

designed to measure personality variables; and investigation of the significance of patterns of occurrence of contextual behaviors. This increased emphasis on content may be related to the changing view of the Rorschach by researchers and the changes in clinicians' perception of clinically useful research.

This change in the view of the Rorschach and relevant research is exemplified by articles discussing both the nature of the test and also clinicians' use both of this test and of Rorschach related research. Aronow, Reznikoff, and Rauchway (1979) point out that the Rorschach can be perceived in two ways: as a nomothetic and as an idiographic device. They note that it appears not to be very reliable or valid as a nomothetic device, but is a good idiographic measure, revealing information about the unique individual. Thus they suggest that one relevant goal of future research would be to focus on studies which could improve the quality and reliability of the idiographic interpretations drawn from this test.

This suggestion of emphasis on research relevant to idiographic aspects of the Rorschach seems especially relevent when viewed in terms of clinicians' typical use both of the test itself and of Rorschach related research. In general, clinicians appear unlikely to

engage in or use research at any time because it is not generally relevant to their practice. Instead, clinicians report that they learned techniques through observation of teachers and through accumulation of experience (Barlow, 1981).

This tendency not to use research is likely to have been exacerbated by the fact that the most prevalent previous research on the Rorschach addressed aspects of the test not emphasized in clinical practice. Schwartz and Lazar (1979) suggest that, although the clinician may initially use normative standards in his interpretation, he tends to use art and skill to attempt to understand the individual. Thus, the clinician focuses on clinical judgment and understanding. This focus is at variance with much research which emphasizes causality and statistical prediction and inference. It is not surprising that the clinician would find this research irrelevant to his needs as a diagnostician and therapist.

A second area where the bulk of research appears at variance with clinicians' needs, is the focus of research on perceptual factors. As mentioned earlier, research on perceptual factors was predominant initially and although less so now, it still exceeds the quantity of research on content. Clinicians, however, rely primarily on con-

tent in interpreting the Rorschach (Aronow & Reznikoff,1976; Potkay, 1971) and as a result would tend to find the majority of research of limited value in efforts to interpret and understand the Rorschach.

The emphasis by clinicians on idiographic application of the Rorschach and on use of content as the major interpretive device, may have influenced the gradual increase in focus on content and context in current literature. However, these factors also suggest directions for future research. To make Rorschach research more relevant to clinicians, investigators could attempt to provide empirical data which could form the basis for more reliable idiographic interpretation of the Rorschach. One important area of this type is the provision of normative data (Goldfried, Stricker,& Weiner,1971; Aronow & Reznikoff,1976). Although there have been some fairly extensive efforts to establish normative data for perceptual factors, there is very limited normative information on the response aspects most emphasized by clinicians, content and context. Recent authors have recognized the need for data of this type and suggest that extensive, detailed norms be established for both content and and context because, "without these data, the clinical use of the Rorschach must depend on subjective, biased and variable 'internal norms' for each individual

clinician," (Goldfried, Stricker, & Weiner, p. 17).

The goal of this investigation was to develop a reliable, detailed content and context category scoring system and apply it to an initial sample of subjects. Data gathered in this way was used to establish initial norms for this age group and to investigate possible discrepancies between well adjusted and poorly adjusted subjects. There were four experimental hypotheses tested: 1) Well adjusted subjects will produce more H responses than poorly adjusted subjects; 2) Poorly adjusted individuals will produce more At responses than well adjusted subjects; 3) Poorly adjusted subjects will produce more Sex responses than well adjusted subjects; and 4) Poorly adjusted subjects will produce more Blood responses than well adjusted individuals. In addition, exploratory hypothesis generating data analysis was conducted on 71 other categories.

CHAPTER II

REVIEW OF RELATED LITERATURE

Researchers on the Rorschach have tended to approach understanding of content in a number of ways. A few investigators, often in the context of other research, have focussed on establishing norms for content. Some have investigated the occurrence of specific types of content. Others have developed and applied content scales designed to measure personality traits such as anxiety, independence, or hostility. Finally, a few of these investigators have attempted to define and study different types of contextual factors appearing in protocols.

Three major attempts to gather normative data were completed by Ames and her colleagues (Ames, Learned, Metraux, & Walker, 1954; Ames, Metraux, Rodell, & Walker, 1974; Ames, Metraux, & Walker, 1971). In the initial research, Ames, Learned, Metraux,and Walker administered the Rorschach to individuals between the ages of seventy and ninety. They tested two hundred subjects, one third of whom were living at home or with relatives, while two

thirds were in institutions for the aged. In 1971, Ames, Metraux, and Walker investigated Rorschach responses for 650 children between the ages of two and a half and ten. Finally, in 1974, Ames, Metraux, Rodell, and Walker completed a similar project for Rorschach performance for 547 adolescents from ages 10 to 16. Within the context of these general investigations, Ames and her colleagues gathered normative data for the appearance of major content categories at each level. The content categories used were similar to those used in the major content systems such as those of Klopfer (Klopfer, Ainsworth, Klopfer, & Holt, 1954; Klopfer & Davidson, 1962) and Exner (1974). At each age level, Ames and her co-investigators reported norms for major categories such as Animal (A), Human (H), and Object (Obj) and also listed a few categories that appeared fairly frequently at that specific age.

In the study of children, Ames et al. reported some areas of apparent consistency across ages in some content categories in addition to some specific trends in other categories. As was true with adults, Ames et al. found the Animal response to be the most frequent content at every age. Across age levels, A% tended to remain at approximately 50%. This level of response was at the upper end of the normal range for adults. In contrast

with this consistency in A, Human and Plant contents fluctuated over time. Human content tended to increase in frequency while Plant (Pl) tended to decrease between the ages of three and ten. Also, as subjects became older the second most dominant content category shifted. Initially Plants were the second leading content. From three to seven, Object became second most popular. Finally, from eight to ten, Human content supplanted Objects in popularity.

Thus the most apparent developmental trends during the period between two and a half and ten were fairly consistent production of A, gradual increase in H until it became the second leading category at approximately eight, and decrease in Plant content. In addition, Anatomy content (At) increased at approximately age eight and occurred consistently after that.

Ames et al. found some similar trends in adolescent Rorschach performance as well as some new changes in response characteristics. The previously reported stability in A (approximately 40%) continued while H stabilized at approximately 19% during this period rather than continuing its previous gradual increase. Several other categories did show a tendency to increase with age. These include Flower, Abstract, Reflection, Geography-Ge-

ology, and Nature. On the other hand, Fire and Architecture tended to decrease. Most other categories did not show a specific trend in occurrence. These include Blood, Explosion, Anatomy, Object, Painting-paint, and Mask.

In contrast to their other research, Ames et al. discussed trends in content production from two different perspectives in their analysis of Rorschach performance of the aged. These two viewpoints were age level and degree of senility. When responses were analysed by age, the authors found that results were generally meager and not consistent. The only clear trends noted were for an apparent increase in A and H and a decrease in Anatomy with age. On the other hand, when analysing performance according to level of senility, Ames et al. observed marked trends. Ames et al. divided the subject population into three groups on a continuum from no sign of senility to senile. These groups were designated as "Normal," "Presenile," and "Senile." A% did not follow a linear trend with these subgroups, but increased between normal and presenile levels and then decreased at senility. This content remained the most frequent response category for normal elderly and presenile subjects, but dropped to second place with the senile population. Human remained the second most frequent category for nor-

mal and presenile subjects, but dropped to third place with the senile group; H% tended to decrease linearly across the three conditions. Anatomy content, on the other hand, rose gradually for preseniles (from 2% for normals to 7% for presenile) and jumped to the most frequently occurring category for the senile group (47%). Within the general animal designation, Sealife content followed a similar pattern to that of Anatomy content, rising quickly from fifth most frequent animal subcategory in normals to most frequent subcategory in senile subjects. Thus, the most striking trends with increasing senility appeared to be rapid increase in Anatomy and Sealife contents and a significant decrease in Human content.

Outside of Ames' work, there have been only a few scattered normative studies of content with few consistent trends in results. The major consistently reported trends are related to popular responses, Animal and Human contents, both within the general population and in specific subgroups (Draguns, Haley, & Phillips, 1967). Investigators agree in reporting A%, as the most frequent response category, with a range of 30 to 50 percent (Ames, Learned, Metraux, & Walker, 1954; Beck, Beck, Levitt, & Molish, 1961; Draguns, Haley, & Phillips, 1967; Exner, 1978, Setze, Setze, Baldwin, Doyle, & Kobler,

1957) and identify H as the second most frequent content, at 10 to 20 percent of total responses (Ames et al., 1954; Exner, 1978). Investigators also report that adults produce a mean of six to eight popular responses per protocol (Beck et al., 1961; Exner, 1978).

In addition to these general findings about major content categories, investigations of content produced by various population subgroups suggest specific differences in content among these groups. Ames (1975) investigated changes in men's gender perception of figures on Card III over time. She found that more men below age 60 perceived females on Card III than subjects had in previous studies, indicating possible changes in content choice over time. Prandoni and Schwartz (1978) and Exner (1978) attempted to develop comparative norms for main content categories across a few broad diagnostic groups: organically impaired, non organically impaired subjects, inpatient depressives, schizophrenics, and normal adults. Results of these studies suggest that patients with organic impairment tend to produce lower H and human detail (Hd) percents than non-organic patients (Prandoni & Schwartz) and that inpatient depressives and schizophrenics tend to produce fewer populars than other adults (Exner,1978). In addition, various occupational groups appear to perform differently on the Rorschach: medical

students, physicians, and nurses tend to produce more Anatomy (At) responses than comparable controls, while psychologists tend to give a high proportion of Human (H) responses (Draguns et al., Thomas, Ross, & Reed, 1964).

Normative information about Rorschach response content categories seems sparse and inadequate at this time. Even in the carefully planned and executed studies by Ames and her colleagues, gathering of content norms occupied a secondary role. Thus, even in this work, normative data were reported for a limited group of content categories. Development of adult norms in other research has been even more perfunctory, with inclusion of one or two main categories as an apparent afterthought in the context of other investigations. Thus there is a need for detailed, complete normative data for adults and other populations at this time.

Research on contextual factors in Rorschach performance is even more limited than studies to establish content norms. This may be related to the fact that contextual behaviors of the subject are less well defined than response content and thus more difficult to measure and study empirically. Contextual aspects include extraneous verbalizations and test behaviors (i.e., card turning). Various contextual verbalizations include elabora-

tive comments, references to previous percepts, expression of like or dislike for a percept, or expression of uncertainty about a percept. The interest that does exist in contextual issues has generally resulted from investigators' conviction that the quality of the Rorschach interaction mirrors typical roles (Phillips & Smith, 1953) and relationship patterns the individual adopts in his general life (Singer, 1977; Singer & Wynne, 1975). In addition, interest in contextual factors also arises from the expectation that quantification of contextual factors can have diagnostic significance (Aronow & Reznikoff, 1976; Weiner & Exner, 1978).

In their book, Phillips and Smith (1953) based discussion of the significance of contextual factors on clinical observation. They suggest that analysis of these factors can provide significant information about roles the client adopts both with other people and also when faced with new tasks. Phillips and Smith did not develop a specific scale or method for scoring contextual behaviors, but suggested areas for the examiner to note and analyse when interpreting Rorschach performance. These areas include subjects' efforts to increase the structure of the test situation, statements reflecting inability to develop a response, indications of hesitation, judgments about a card, and non-verbal behaviors.

Like Phillips and Smith, Singer (1977)(Singer & Wynne, 1975) feels that communication patterns on the Rorschach can reflect significant aspects of a subject's general interpersonal relationships. She became interested in patterns and deviance in communication, particularly within families of schizophrenics, and developed a Communication Deviance Scale to assess this area. This method covers a wide range of contextual factors, including appearance of speech fragments, unstable percepts, extreme tentativeness, contradictory or inconsistent references, critical remarks, and retraction of responses.

Although this effort to devise a scale of this type is needed for the establishment of a more reliable, consistent measure of contextual verbalization than has previously existed, there are several factors which limit its usefulness at the present time. In order to develop this scale, Singer and her colleagues have used the Rorschach in highly innovative and non traditional ways (Lerner, 1975a) and focussed specifically on deviant contextual behaviors. They did not include categories on their scale which reflect behaviors which would appear on a wide variety of Rorschach protocols both within the normal population and in a crossection of other diagnostic groupings. Thus, the applicability of this scale in clinical settings may be limited. In addition, there has

been limited research on reliability or validity of this scale (Aronow & Reznikoff, 1976; Lerner, 1975a). Thus, although this scale may be potentially useful, its applicability to clinical settings, reliability and validity are unclear.

In addition to these efforts to measure general contextual behaviors, several authors have developed scales designed to test specific components of contextual behavior as reflections of specific dynamic processes or diagnostic categories (Aronow & Reznikoff, 1976; Watkins & Stauffacher, 1975; Weiner & Exner,1978). Investigators including Watkins and Stauffacher (1975) and Weiner and Exner (1978) devised scales to reflect pathological thinking while Loveland (1967) developed a method for measuring group dynamics with the Consensus Rorschach.

A number of investigators have developed scales to reflect disordered, pathological thinking on the Rorschach (Watkins & Stauffacher, 1975; Weiner & Exner, 1978; Lerner, 1975b). Generally these scales have the diagnostic goal of assisting in differentiation of schizophrenic from nonschizophrenic subjects. In addition to including some noncontextual categories, these scales have a number of categories reflecting qualities of the subject's verbalizations which are hypothesized to

reflect disordered thinking. These include queer verbalizations, confusion, incoherence, mangled or distorted percepts (Watkins & Stauffacher,1975) and autistic logic. Initial investigations with these scales suggest that they are fairly reliable and do differentiate schizophrenics from normals fairly effectively.

In contrast to previously described attempts to use measures to assess a specific diagnostic category, Levine and Spivack (Aronow & Reznikoff, 1976) developed a contextual scale to assess a dynamic process, repression. This system includes seven scales: specificity of the concept, elaboration, impulse responses, primary process thinking, self references, movement, and amount of organization of the response. This scale appears to have good interjudge reliablility and satisfactory temporal stability. However, results of validity studies have been weak and inconsistent and thus do not clearly indicate that the Rorschach Index of Repressive Style (RIRS) is a valid measure of repression.

In addition to studies of context with individually administered Rorschachs, some authors have investigated contextual behaviors in the group administered Consensus Rorschach (Aronow & Reznikoff, 1976). These approaches tend to focus on analysing interaction pat-

terns among subjects taking the Rorschach together (Loveland, 1967; Willi, 1967). In one system, developed by Loveland, the focus is on the quality of communication patterns: clarity of communication; posture participants assume in their interactions; and the level of each individual's apparent understanding of other participants' communications. A second system, developed by Willi (1967), attends less to specific components of the interaction, but rather examines the roles participants adopt in the group Rorschach. He uses his scoring system to assess both the comparative strengths of participants and also personality changes that occur as participants try to reach a consensus. To address these questions, he scores four areas: 1. the comparative number of proposals by various participants; 2. techniques individuals use to implement or gain acceptance for their proposals; 3. the emergence of leadership in the interaction; and 4. who keeps the card. Although these approaches appear useful in the Consensus Rorschach setting, because they focus on interactions among multiple subjects, they do not appear applicable to the individually administered Rorschach.

In contrast with other contextual systems' focus on very deviant behaviors or their limitation to atypical administration procedures, Zubin developed a scoring system which includes a number of behaviors observed fre-

quently on normal protocols (Aronow & Reznikoff, 1976). He has a number of scoring categories which reflect the subject's verbal elaborations of percepts and other categories reflecting non-verbal behaviors and style of response. In the first group, he includes indications of subject's evaluation of his percept and tendency to describe human percepts in a positive or negative light. In the second group he includes perseverative tendencies, card turning, and other card handling. This scale appears to be a significant step toward objectification of a wide range of contextual categories. However, because there are no norms and limited reliability and validity data, the scale is of very limited practical use at this time.

In summary, the limited research on contextual qualities of the Rorschach has tended to focus on diagnostic applications of contextual factors or on a very limited range of deviant behaviors. In the few cases where the investigators have attempted to include a wide range of behaviors in their analysis (Phillips & Smith, 1953; Zubin, Eron, & Schumer, 1965), there is limited reliability and validity data and no normative information. As a result, these systems are of limited use to the clinician at this time.

Outside of establishment of norms and study of contextual behaviors, research on content has taken two major directions: investigation of the significance and occurrence of individual content categories and development and application of scales designed to assess components of personality. The emphasis on one or the other of these two approaches was related to conceptualization of the significance of content. In some cases, researchers have conceptualized each type of content as having a specific symbolic impact (Phillips & Smith, 1953) while other investigators have not emphasized the unchanging significance of an individual content response but have emphasized recurrent themes, configurations, or sequences of content as reflecting dynamic processes in patients (Schafer, 1954; Richardson, 1974; Dana, 1978). Phillips and Smith (1953), who feel that content has a universal significance, suggest that content use is likely to reflect central personality motives and traits to differing extents. If a subject develops a frequently seen content, he is likely to be revealing the extent of his conventionality. However, if he develops content that is infrequently seen on a card, he is likely to be revealing core motives and traits. In Phillips and Smith's view, the central traits and motives revealed in this way will not necessarily be expressed in behavior. The extent of

behavioral expression of these traits will be decided by factors including level of social adjustment, pathology, and awareness of his own conflicts and attitudes. Thus, Phillips and Smith see content as having invariant meaning, but a range of possible behavioral correlates. Phillips and Smith based their understanding of the symbolic meaning of content largely on theory and on clinical observation. Subsequent research in this area has generally focussed on exploring these theoretical conceptions and has emphasized the study of individual categories.

In contrast to the tradition of Phillips and Smith, a number of authors have seen content configurations as reliably reflecting intrapsychic processes and have relied less on interpretation of the meaning of specific responses (Dana, 1978; Richardson, 1974; Schafer, 1954). This trend in general has resulted from two possible biases: 1. that a number of different contents can reflect one theme in spite of different manifest content (Schafer, 1954); and 2. that specific contents do not necessarily have universal symbolic impacts (Dana, 1978; Richardson, 1974; Exner, 1974). Schafer (1954) saw traditional content categories as having limited value, merely indicating breadth of interest and specific preoccupations. He proposed a thematic analysis system in

which contents would be grouped according to common thematic impact, rather than according to actual categories. In his view, this approach provides more fruitful insights into the dynamic themes in the personality than analysis by individual contents.

In 1974, Richardson administered the Rorshcach to subjects whom he then divided into subgroups (users and nonusers) according to whether each individual had produced each of nine specific animal responses on the test. He also had all subjects describe a number of animals, including the nine target Animal contents. When he compared users' and nonusers' descriptions of these percepts, he found that, although there are some common interpretations of symbols for both groups of subjects, symbols are also seen differently by these subjects. This implies that contents do not have an universal impact and thus cannot be understood as representing a specific dynamic. Exner (1974) supports the view that content does not have universal meaning: "The literature concerning content seems to convey the notion that no single content category can be regarded as having an absolute relationship to any personality variable and/or psychopathological state, nor should such relationships be inferred in interpretation. The overall configuration of content, however, will often provide guidelines from

which other data in the Structural Summary can be understood with greater specificity,"(p. 304).

This second view has provided an impetus for development and application of scales designed to reflect specific personality traits or motives (Aronow & Reznikoff, 1976; Elizur, 1975; Goldfried, 1975; Holt, 1975). A major goal in content research has generally been to find ways of diagnosing or predicting behavior. To do this researchers have generally emphasized the second approach to content analysis and developed scales or configurations of signs to indicate specific processes or traits. However, research has also been completed on single content categories. In the case of the major content categories, Animal, Human, Anatomy, and Populars, there appears to be some consistent trends while results of research on other categories are less clear.

Researchers tend to agree that Animal content generally indicates stereotypy or reduced intellectual functioning (Klopfer et al., 1954; Piotrowski, 1957). In their review of research on content, Draguns, Haley, and Phillips (1967) agree with these formulations about stereotypy and intellectual functioning and conclude that "A% represents an index of some of the more mundane aspects of adaptive control and is akin to a measure of reality

testing in its more concrete sense,"(p. 23). Studies investigating these hypothesized relationships between A% and intellectual functioning and stereotypy have been somewhat inconsistent, but have tended to support this relationship. Aronow and Reznikoff (1976) conclude that most studies suggest that A% is an indication of stereotypy of thought. However, these studies do not consistently indicate that A% is related to intelligence.

In addition to investigation of the general category of A%, Gill (1967) investigated the impact of 50 specific Animal contents. He had subjects identify the sex and specific characteristics associated with A content appearing on the Rorschach. He found subjects agreed on the sex of five out of 50 animals. However, there was also substantial variation in characteristics attributed to the animals, indicating that specific A contents have different symbolic impact for different individuals.

Investigators of the Rorschach have consistently identified Human and Human Movement (M) as reflecting the capacity to empathize with and relate to others and indicating social maturity. Although research on the relationship of H and M to empathy has been inconclusive, current research does appear to support the conceptuali-

zation of H as a measure of social maturity.

Research with H suggests that H acts as an index of social maturation and appears to vary directly with cognitive development and capacity for mature social relations (Draguns, Haley & Phillips, 1967; Exner, 1978). In addition, H appears to reflect level of social interest: this is reflected in findings that professionals in fields that emphasize contact with people (physicians, psychologists, and nurses) tend to produce a high percentage of H on their protocols (Pruitt & Spilka, 1975).

As stated previously, research is inconclusive regarding the hypothesized relationship between H and empathy (Aronow & Reznikoff, 1976; Lerner, 1975c). There is, however, some evidence that M is correlated with empathic capacity (Bene, 1975; Lerner, 1975c). In addition, there is some evidence that M is related to creativity (Peterson, 1978; Raychaudhuri, 1971). Raychaudhuri (1971) analysed the production of M for creative and non-creative male and female subjects. Results of his study suggested that high M production was correlated with creativity. However, in a critique of this research, Aronow (1972) pointed out that results of Raychaudhuri's investigation were not clearcut because of the possible confounding effect of education and IQ.

This research is representative of many studies in the area. Because of the complexity both of the test and the human personality, there are often a number of conflicting explanations for results of a study.

Rather than investigate either H or M individually, Pruitt and Spilka (1975) developed an Empathy Object Relationship Scale based on occurrence of both H and M in protocols. They theorized that, because H and M appear to indicate the capacity for empathy and for harmonious relationships, H and M content would distinguish between emotionally disturbed, vocationally handicapped children in group therapy and a similar group not involved in group therapy.

Their hypothesis that the group in therapy would produce more H and M than the nontreatment group was supported, thus suggesting the validity of the Rorschach Empathy Object Relationship Scale. However, although these initial results are encouraging, more research is necessary to clearly establish validity, reliability, and clinical efficacy of the scale.

Research on less frequently occurring categories or specific subcategories (i.e., a specific type of animal or human like percept) is more sparse and generally reflects less consistent trends than investigations of H

and A. Research on these less frequent responses tends to focus on the occurrence of contents including Anatomy, Sex, Blood, Inanimate Movement, and a few, specific unusual responses such as transparency or crossection.

Investigations of Anatomy (At) generally indicate that these responses reflect anxiety and concern with one's bodily functioning and integrity and concurrent lessening of interest in the external world (Aronow & Reznikoff, 1976; Draguns Haley, & Phillips, 1967; Exner, 1978; Weiss & Winnick in Aronow & Reznikoff, 1976). In addition, an extremely high At percentage appears to be correlated with physical rehabilitation failure (Carnes, 1971; Peterson, 1978).

Blood (Bl) and Sex responses appear to reflect the individual's manner of managing his aggressive and sexual impulses. These types of responses occur more often among individuals who have been apprehended for sexual and aggressive acts (Draguns, Haley, & Phillips, 1967). In addition, research with Catholic seminarians (Bartsch, 1979) suggests that this particular subpopulation tends to develop few Sex or At percepts. They tended to develop sexual material in a somewhat indirect, immature way and avoid overt sexual responses.

Research on inanimate movement (m) suggests that m reflects tension, conflict and frustration (Exner, 1978) and also suggests that high m production may reflect self analytic tendencies (Brien, Eisenman, & Thomas,1972).

There has been very limited research on the significance of specific, unusual responses to Rorschach stimuli. Blatt and Ritzler (1974) investigated the hypothesized relationship between suicidal behavior and production of crossections and transparancy responses on the Rorschach. The authors studied the Rorschach performance of 12 successful suicides and 12 non suicidal patients matched for age, sex, IQ, and number of responses. They found that, as hypothesized, suicidal subjects produced more crossection and transparency responses than non suicidal patients. This finding was supported in a replication by Rierdan, Lang, and Eddy (1978). A study of the significance of the abstract response (Sanders, 1977) suggests that abstract responses (Abstr) are correlated with achievement, endurance, and sentience in males and with dominance, nurturance, exhibition, and social recognition in females.

Thus research appears to support tentative conclusions about the significance of H, A, At, and M and suggests further research in several other areas. However,

there are a number of problems with data on the significance of specific content categories. First, a number of the valid studies were completed many years ago when control for confounds in Rorschach research was not as stringent. In addition, many studies from which support for hypotheses were derived, were tangential to the main hypotheses about the meaning of content categories. These studies often correlated a number of Rorschach scores with a specific criterion and thus lacked the focus to allow for support for a specific hypothesis.

As was stated earlier, many authors have concentrated on development of content scales based on a number of types of content rather than on analysis of the significance of individual content categories. In general these scales are designed to assess a particular personality trait or dynamic. Some of the areas focussed on in these scales include hostility/aggression, anxiety, homosexuality, and primary process. Generally investigators based the development of these scales on theoretical constructs and clinical observation, rather than on empirical data. After scale development, investigators have tended to conduct research to assess the empirical and clinical value of the scale.

Elizur followed this pattern in the development of

his scale to assess anxiety and hostility (Aronow & Reznikoff, 1976; Elizur, 1975; Goldfried, 1975a; Goldfried, Stricker, & Weiner, 1971). Thus, when he designed his scales, he based them on intuitive and theoretical hypotheses about qualities in responses that would indicate anxiety or hostility. In his system, responses are scored as anxiety evincing if they are characterized by features such as anxiety expressed or implied, anxious expressive behaviors, or responses symbolic of anxiety. Research on this intuitively derived scale indicates good interjudge reliability (Goldfried, 1975a). There is also evidence that the anxiety scale is significantly related to ratings of anxiety by self and others and to specific anxiety related symptomatology (Aronow & Reznikoff, 1976).

In the Elizur hostility scale, responses are scored as hostility evincing if they express or imply hostility, if they contain percepts behaving in a hostile way, if they symbolize hostility, if they are objects of aggression, or if they connote anxiety and hostility. This scale has much in common with other less frequently used hostility scales, including the DeVos hostility scale. These scales all tend to emphasize projection of violent action, malevolent ideation, or the results of violent action into the Rorschach protocols. Research on hostile

content in the Rorschach has indicated good ability to differentiate subjects on the basis of past histories of aggression (Aronow & Reznikoff, 1976). It has also suggested significant relationships between hostile content and ratings by self and others (Aronow & Reznikoff, 1976; Lerner, 1975d), and correlation of hostile content with extremes in aggressive behavior (Goldfried, Stricker, & Weiner, 1971; Haley, Draguns, & Phillips, 1967). However, research on the relationship of the Elizur scale to other projective and objective tests of hostility has been inconsistent and at times in directions opposite to that predicted (Aronow & Reznikoff, 1976; Goldfried, Stricker, & Weiner, 1971; Haley, Draguns, & Phillips, 1967; Megargee & Cook, 1967). This inconsistency with other measures may reflect the fact that other tests measure different aspects of hostility.

Research on Elizur's anxiety and hostility scales suggests that both show significant relationship to symptomatology and ratings by self and others. However, the absence of norms makes these scales of limited value for the clinician (Aronow & Reznikoff, 1976).

Although the Elizur scales are the most frequently used measures of anxiety and hostility, other authors have also developed scales to measure these traits.

DeVos (Aronow & Reznikoff, 1976) developed a scale in 1952 which was designed to measure seven areas: hostility, anxiety, bodily preoccupation, dependency, positive feelings, and miscellaneous and neutral responses. The components of his anxiety and hostility subscales are very similar to those of Elizur. Because there is little research about the validity of DeVos' version, it is not used frequently at this time. Research on all subscales has been limited and in general was completed twenty or more years ago. Thus this scale appears to be of limited current value.

A few scales have been developed to measure homosexuality. The two most frequently used of these are the Wheeler Signs and Schafer's themes (Aronow & Reznikoff, 1976; Kaczala, 1971). During the past several years, there has been increasing controversy both about the validity of these signs and about their relevance in the current practice of psychology. This controversy is generally focussed on two areas: 1) the lack of clinical applicability of the scales because of unproven ability of these measures to discriminate between latent homosexuals and other groups, and 2) lack of relevance of these scales because homosexuality is no longer seen as a meaningful diagnostic classification.

Wheeler (1975) developed his scale of twenty homosexual signs in 1949. Items in this scale are based either on components of previously developed scales or on theoretical rationales. Eight general themes are represented on this scale: 1)confused body or sexual image; 2) preoccupation with pre-genital sexuality; 3)derogatory views of people in general; 4) responses reflecting paranoia; 5) perception of women as threatening or unappealing; 6) symbolic phallic destruction; 7) sex viewed in an aggressive or destructive light; 8) feminine identification (Aronow & Reznikoff, 1976; Wheeler, 1976). Generally research with this scale has focussed on its capacity to differentiate between overt homosexuals and non homosexuals. Except for one study by Wheeler when he developed the scale, research has not investigated the capacity of the scale to differentiate between latent or repressed homosexual and non homosexual subjects. Results of this study did suggest that Wheeler's signs did differentiate successfully between non homosexuals and repressed or latent homosexuals. In general, results of research on the capacity of the Wheeler signs to discriminate between overt homosexuals and non homosexuals have been positive (Aronow & Reznikoff, 1976; Goldfried, 1975b; Goldfried, Stricker, & Weiner, 1971; Haley, Draguns, & Phillips, 1967; Peterson, 1978). Stone and

Schneider (1975) investigated the ability of the scale to differentiate among male psychiatric patients divided into three groups: homosexual, sex role disturbed, and normal control. The groups did not differ significantly in age, education, or intelligence. They found that Wheeler's signs successfully discriminated both the homosexual and the sex role disturbed groups from the normal group.

In 1977, Kwawer suggested that inconsistent results of research with the Wheeler signs might be related to the level of arousal of underlying conflicts in homosexual subjects. He pointed out that, often, nonsignificant results were obtained in situations where homosexual subjects were under no stress related to their sexuality, displayed no psychopathology, and simply volunteered for a study. He suggested that, because these subjects were not experiencing intensified conflicts, they did not have an elevated number of Wheeler signs. To assess this, he compared protocols of 36 homosexuals and 36 heterosexuals each of whom was administered the Rorschach twice; once under an experimental condition designed to intensify unconscious dynamics hypothesized to be related to homosexuality, and another time under neutral conditions. Results indicated that, under the experimental condition, Wheeler signs discriminated between the two groups, while

they did not discriminate under the control condition. These findings support the hypothesis that Wheeler signs are valid when unconscious conflicts are intensified.

In contrast to Wheeler's system, Schafer's scale is based on two specific areas of his thematic content: Fear and Rejecting Attitude Toward Masculine Identity; and Feminine Identification in Men (Aronow & Reznikoff, 1976; Haley, Draguns, & Phillips, 1967; Schafer, 1954). The advantage of this thematic orientation is that it allows the examiner to score all examples of a specific type of response rather than limiting him to a specific blot area. As is true for Wheeler's signs, research on this system has emphasized differentiation of overt homosexuals from non homosexuals and has generally been positive (Aronow & Reznikoff, 1976).

Andersen and Seitz (1969) used the Schafer signs to complete a similar study to that of Stone and Schneider (1975). They applied the Schafer themes to the protocols of male psychiatric patients divided into three subgroups: homosexual, sex role disturbed, and heterosexual and found that the themes discriminated among all three groups.

In one study, Raychaudhuri and Mukerji (1971) compared the ability of the Wheeler signs to that of the

Schafer themes in differentiating active homosexual, passive homosexual, sex role disturbed, and heterosexual normal convicts. The authors found that the Wheeler signs were only able to make two significant discriminations (between both active and passive homosexuals and sex role disturbed). The Schafer scheme, on the other hand, resulted in four significant discriminations: between active homosexuals and sex role disturbed; between active homosexuals and heterosexuals; between passive homosexuals and sex role disturbed; and between passive homosexuals and heterosexuals. These results suggest that, although Wheeler signs discriminate to some extent, the Schafer scheme discriminates sexual orientation more effectively.

In addition to undertaking research on the effectiveness of homosexuality scales, some authors have questioned the relevance and clinical need for these scales. These authors (Anderson, 1975; Aronow & Reznikoff, 1976) suggest that the "meaning and value of establishing a 'diagnosis' of homosexuality are becoming increasingly dubious." (Aronow & Reznikoff, 1976, p. 171) This dissatisfaction with the diagnosis of homosexual is based largely on the fact that the understanding of homosexuality is changing among clinicians and that homosexuality is no longer classified as a proper clinical diagnosis.

Thus it is not clear that there is any value in identifying homosexual trends in a person. In addition, these authors point out that, in general, research has shown the signs to discriminate between overt homosexuals and heterosexuals, but not between latent homosexuals and other groups(Anderson, 1975; Aronow & Reznikoff, 1976; Rosen, 1975). The second type of discrimination is the one that would have clinical value because, unlike overt homosexuals, latent homosexuals would not tend to be able to verbalize their homosexual tendencies. Thus the value of these scales has been questioned recently in two areas: 1) the lack of clinical value of the scales because their ability to identify latent homosexuality is unproven; and 2) the lack of relevance of these scales because homosexuality is no longer viewed as a mental disorder.

A second area which has provoked considerable research is the assessment of primary process manifestations. In general this research has used a scale developed by Holt and Havel and then further refined by Holt (Aronow & Reznikoff, 1976; Haley, Draguns, & Phillips, 1967; Holt, 1975; Holt, 1977; Holt & Havel, 1960; Lerner & Lewandowski, 1975). Although the use of this primary process scale requires no unusual administration techniques, Holt suggests the addition of an affect inquiry in

which subjects are asked to describe emotional reactions to the test stimuli (Aronow & Reznikoff, 1976; Lerner & Lewandowski, 1975). Holt (1977) conceptualiized his scale as a research, rather than a clinical tool. He felt it was too cumbersome and time consuming to use clinically and was more appropriate for use with groups rather than for individual analysis.

Holt's scoring system is divided into three groups of categories: content scores, which have to do with evidence of wishfulness in the content of the responses; formal scores, which relate to deviance in response structure; and control and defense scores, which reflect the subject's reactions to emergence of material in either of the first two groups. Holt based his content section on the premise that overt content of a libidinal or aggressive type reflects the drive domination characteristic of primary process. He developed ten categories: seven of libidinal and three of aggressive content. Libidinal categories include responses with oral-receptive, oral aggressive, anal, sexual, exhibitionistic-voyeuristic, homosexual, and miscellaneous themes. The three aggressive areas are responses containing an aggressor, a victim of aggression, or the aftermath of aggression. Each category of content is divided into two levels: Level I reflects more primitive,

blatantly unsocialized responses while Level II refers to more controlled responses.

Formal categories are also scored on a Level I or Level II system and tend to refer both to perceptual organization of the response and to the thought processes underlying the response. These categories attempt to assess deviations from the logical orderly thinking characteristic of secondary process. These categories include condensation, displacement, explicit symbolism, contradiction, verbalization, and distortion of thought and perception.

The final group of variables, the Control and Defense Scores, are designed to assess the subjects' defensive organization, especially as it relates to control over regressive thinking. Holt identified a number of control and defense mechanisms which he then subdivided according to their effectiveness. These mechanisms include level of remoteness, context, pathological defenses, overtness, sequence, adaptive transformation, and amount of reflection.

Research with this scale has suggested that specific summary scores are related to a number of cognitive and perceptual characteristics. A measure of adaptive regression derived from the Holt system appears related

to ability to tolerate and deal adaptively with situations in which reality contact is temporarily suspended (Holt, 1977; Lerner & Lewandowski, 1975; Wright & Zubek, 1969). Adaptive regression measures have also been related to therapy prognosis (Fishman, 1973a). However, Fishman (1973b) also criticizes the manner of deriving the adaptive regression score. Because this score is based on the Defense Effectiveness Score (which is a category score of the Holt system), he feels the score may simply be a mathematical artifact, rather than a specific score which reveals unique information about the individual.

In addition to research on specific subscores of the Holt Scale, a number of studies have been conducted to assess differences in expression of primary process thinking in the Rorschach as it is related to other variables of either a diagnostic, behavioral, or cognitive nature. Some research has investigated the relationship of primary process scores to level of cognitive development. Benfari and Calogeras (1968) found that college students tended to show fewer manifestations of primary process thinking as they progressed to higher levels of moral and conscience development. This finding was supported by Schimek (1974) who found that primary process manifestations tended to decrease as adolescents reached

early adulthood. He felt this decrease in primary process manifestations was related to intelligence and increase in cognitive complexity. In a study with second grade children, Russ (1980) found that measures of Defense Effectiveness and adaptive regression were both positively related to achievement.

In addition to studies emphasizing the relationship between primary process manifestations and cognitive complexity, a number of studies have assessed the ability of the Holt scale to differentiate among diagnostic groups or subjects with varied reality testing. Thus, Lerner and Lewandowski (1975) conclude that Holt's scale appears to differentiate schizophrenics from nonschizophrenics successfully and, in addition, to differentiate process from reactive schizophrenics. These conclusions were supported in a study by Blumetti and Greenberg (1978) which found that female psychiatric patients who showed evidence of poor reality testing produced a greater number of responses at a low developmental level than a more intact group.

As a research tool, the Holt scale has shown encouraging results. It appears to differentiate various diagnostic groups, levels of cognition, and ability to tolerate suspension of usual reality contact. However,

as Holt has emphasized, this is a lengthy cumbersome system which is more appropriate for use in comparing different groups than in individual analysis.

Although in general researchers have used the single criteria of H or M in assessing interpersonal or object relations, a few authors have developed scales to assess these factors. Research on these scales is very limited and thus their clinical application is unclear. As mentioned previously, Pruitt and Spilka (1975) (Lerner, 1975c) developed a scale based on qualities of H and M content in test protocols. They applied this scale to emotionally disturbed, vocationally handicapped subjects and found that it discriminated between those in group therapy and those not in treatment. This supported their general hypothesis that the quality of H and M would reflect empathy and capacity for harmonious relationships in these subjects. These results are encouraging; however, since this research is the only study of the scale, further research would be necessary to establish clinical efficacy and validity of the scale.

Urist (1977) took a different approach in assessing interpersonal relationships. Rather than investigating the appearance of H and M, he developed a scale which focussed on relationships between both animate and inani-

mate objects on the Rorschach. He compared scores on this scale to observed behavior and subjects' descriptions of relationships on an autobiographical task, and found high correlation among the three measures. He felt that this indicates that there are enduring aspects of the subject's capacity for relationships reflected in the three measures and that the Rorschach can tap this capacity. Although, as was true in Pruitt and Spilka's scale, these results were encouraging, more results would be necessary to assess the significance of the scale and its clinical efficacy.

Fisher and Cleveland developed a scale based on clinical observations as well as general theoretical constructs. This scale, the Barrier and Penetration Scale, was designed to reflect definiteness of body boundaries (Aronow & Reznikoff, 1976). Two types of responses were defined: barrier responses, in which the periphery of percepts was stressed, and penetration responses, in which the penetrability of boundaries was emphasized (Goldfried, Stricker, & Weiner, 1971). Research on this scale indicates good interjudge reliability and also indicates that scores on this scale are related to psychosomatic disorder, reaction to stress and measures of social interaction (Aronow & Reznikoff, 1976). Research also indicates that creativity and adjustment to physical

disability are related to barrier penetration scores (Loshak & Reznikoff, 1976; Mitchell, 1970). In a study using this scale, Stevens (1981) found that high and low barrier individuals differ systematically in the value they ascribe to others. Stevens suggested that this supports previously hypothesized differing values of high and low barrier groups. Specifically he indicated that high barrier subjects display low interest in scientific concerns and more interest in working with people and more independence and ease in a leadership role than low barrier individuals. He found that subjects tended to ascribe high value to individuals who reflected their own barrier image. These results support the specific hypotheses about different behaviors and beliefs of different barrier score groups.

Research to date appears to have approached understanding of content and context from a variety of viewpoints: these include limited efforts to develop norms, research on specific content categories, development of scales to measure personality traits, and definition and measurement of contextual behavior. In general emphasis has been on development of scales and investigation of specific contents theoretically hypothesized to be related to specific personality traits. Basic empirical research on norms and frequency of occurrence of content

and contextual behaviors has generally been sparse. In addition, when this research has been conducted, it is often secondary to other more extensive research. In these projects, collection of data has generally been limited to development of norms for broad major categories of content and has ignored occurrence of more narrowly defined and less frequently occurring categories.

Similarly, when developing scales to measure personality traits, authors have generally developed systems based on theorectical expectations regarding significance of content. Thus scales to measure primary process and anxiety and other traits have been developed largely as a result of the author's clinical, theoretical rationale. Only after these scales are developed based on theory, do researchers begin to empirically investigate the frequency of occurrence of specific content and content configurations.

This emphasis on theoretically based systems at the expense of expanded basic research on the frequency of occurrence of content and context, suggests areas for further research. First, investigations resulting in increased, more detailed normative data would prove valuable, both for provision of an empirical basis for future research and as an aid to clinicians who use this

tool. With increased empirical data on the occurrence of content and context, investigators would be more able to develop scales which realistically reflect Rorschach performance rather than depending mainly on theoretical formulations. This information would appear especially useful clinically because it appears that clinicians emphasize content interpretation and idiographic interpretation in their use of the Rorschach. Content norms would provide a reliable information base from which practitioners could then move to more valid interpretations of test performance.

This research was designed as an initial step toward meeting some of the research needs outlined above. An extensive content and context scoring system was developed and applied to an initial sample of 90 protocols. The goals of this study were threefold: 1) establishment of initial normative data; 2) investigation of experimental hypotheses regarding content and context factors which discriminate between poorly and well adjusted subjects; and 3) hypothesis generating exploration of factors which discriminate between the two groups of well and poorly adjusted subjects.

The experimental hypotheses were:

1. Well adjusted subjects will produce significantly more Human content than the poorly adjusted group;
2. The poorly adjusted group will produce significantly more Sex content than the well adjusted group;
3. The poorly adjusted group will produce significantly more Anatomy content than the well adjusted group;
4. The poorly adjusted group will produce significantly more Blood content than the well adjusted group.

CHAPTER III

METHOD

Subjects

The 90 subjects of this research were selected from students at a midwestern college level seminary in the early 1960's. All subjects were 19 years or older and in their first or second year of college. There were three subgroups with 30 members each. Members were assigned to subgroups based on ratings by faculty and on their performance on the MMPI. The MMPI was routinely administered to all the students in the seminary. Members of one group were rated as the most outstanding and best adjusted seminarians by seven faculty members who, over a period of one year, got to know them well through teaching and individual and group counseling. In addition, this group had no MMPI scales above a score of 70. Members of a second group were judged to have problems in personal adjustment when assessed in the same way. These group members also had two or more MMPI clinical scales above a score of 70. Members of the third group were intermediate to the two previously described groups.

This group had no critically high MMPI scales nor were they selected by the faculty as outstanding nor as having problems in adjustment.

Procedure

Data used in this research were archival and consisted of Rorschach protocols administered in the early 1960's to a group of 90 seminarians. The data were coded by number and the identity of subjects was not known to the investigator.

Rorschach tests were administered to the 90 subjects by five trained graduate students in clinical psychology as part of their internship work and supervised by one of the clinical faculty. MMPI scores were also available on all subjects. All test data were coded and anonymity established for all test protocols. Initial scoring of protocols was made without any knowledge of which subject belonged in any of the groups.

Protocols were scored on content and contextual factors on a rating system developed specifically for this purpose. The development of the rating system consisted of several steps. The broad categories of context and content were each based on previously developed analysis systems. Once established, however, these broad

categories were subdivided as necessary to increase the precision of the rating scale in reflecting differences in content and contextual behaviors.

Broad categories of the content section were based on the Klopfer (1954) content category system. This system was selected for two reasons. It is extensive, adequately covering the breadth of content seen on the Rorschach. It comprises a large number of categories among which it is easy to discriminate so that it is not difficult to select the appropriate content category for a specific response. This system seemed to provide a good basis for further development of the current rating scale because it provided a large number of discrete, clearly defined categories. In addition to the basic categories described by Klopfer, this scale also included a list of populars, categories for types of movement, aggressive content, presence of interaction, indications of hanging or precarious balance, and various categories which helped describe the quality of the response more clearly (young vs. old and worn).

The basis for the context portion of the scale was drawn from several sources including Phillips and Smith (1953) and Singer (1977). General behaviors which reflected the subject's response to the testing situation

were selected from these sources including areas such as reactions/attitudes toward the examiner, reactions to percepts, self reference, reactions to the lack of structure inherent in the test situation, attempts to add structure to the test situation, and hesitation or difficulty in developing a response.

Once the broad content categories were established, a rater scored the first 45 protocols according to this system, revising and clarifying the system as necessary. The goal of this process was to establish increased precision in the system with narrower, clearly defined subcategories. In the case of content, specific response types which appeared significant to the rater and a skilled clinician or specific response types which occurred repeatedly were added to the rating system. In the area of context, categories were added as necessary to apply to previously undefined test related behaviors.

After development of the preliminary scale through scoring 45 protocols, interjudge reliability was established. Initially the author reviewed the system with a second rater who was a clinical graduate student trained in testing. At this point the raters worked to clarify any ambiguous definitions. Following this, the two raters scored five protocols from a separate sample of

tests. A separate sample was used for establishment of interjudge reliability for two reasons: 1) to prevent contamination of results or the need to omit subjects on which the scoring system was developed; and 2) to establish generalizability for the scoring system. Based on comparison of scoring on these, raters developed more precise definitions for the categories. After this initial practice application of the rating system, raters scored four additional protocols from this separate sample to establish interjudge reliability with a general sample of college aged male and female students. In addition, raters also scored six (two from each subgroup) protocols from the sample for this study to establish reliability within the sample. Interjudge reliability for these ten protocols was assessed using Cohen's Kappa Coefficiant of Agreement. The Cohen's Kappa ($\underline{k}$) (Cohen, 1960; 1968) was chosen for this analysis because it takes chance into account and because, unlike the correlation coefficient, it counts only agreements. It is the best available, most precise measure of association for categorical data. Unlike a Contingency Coefficient, $\underline{k}$ for positive association varies between zero and plus one under all conditions and can be compared across measures with different numbers of categories.

Interjudge reliability was considered adequate for each area if it reached the .80 level or better (Anastasi, 1982). All but two of the 94 interjudge reliability scores were at the .80 level or higher, with 85 scores at or higher than the .90 level. Scores were looked at in terms of interjudge reliability for each of the two subgroups (protocols from the experimental sample and protocols from general college aged sample) as well as for overall reliability. In this case, reliability appeared essentially equivalent for each subgroup on 91 of the 94 scores. In two cases Active Movement and Card Turning, interjudge reliability on the initially scored protocols (those of general college students) was significantly lower than on the final group of protocols. Interjudge reliability for Active Movement was .78 for general college students, .99 for the experimental subsample and .89 overall. For Card Turning, the values were .79, .99, and .91 respectively. In both cases judges showed initial difficulty with the definitions of the terms; as the definitions were clarified, interjudge reliability improved markedly.

As mentioned earlier, on two categories, interjudge reliability did not reach the .80 level. These categories were Response Uncertainty, and Response Specificity. In both cases, interjudge reliability was fairly close to

the .80 level, with Response Uncertainty at the .78 level overall(.94 for general college protocols and .68 for the experimental sample) and Response Specificity at .75 overall (.79 for general college protocols and .73 for experimental protocols). Although these categories did not reach the .80 level of reliability, they were kept in the scoring system. However, because of their lower level of interjudge relaibility, any results with these factors will have to be assessed with caution.

Once interjudge reliability was established, raters divided the 90 protocols and each scored 45. The author scored the 45 previously not rated, while the second examiner scored the 45 already rated. Neither rater was aware of group membership of the protocols they scored.

CHAPTER IV

RESULTS

To establish normative data, frequencies were tabulated for all categories across all groups. Appendix 2 summarizes the frequency data across categories; Table 1 summarizes frequency of variables occurring one or more times per protocol. Out of the 280 categories tabulated the vast majority tended to occur fewer than once per protocol. Only 44 categories occurred more than once per protocol. These frequently occurring categories can be divided into six broad areas: context (7 frequently occurring categories), populars (total number of populars per protocol), color (two categories), movement (10 categories), traditional content (23 categories), and number of responses. The parenthesized alpha numeric characters used in the following text are content category symbols and refer to Tables 1 and 2.

In the area of context, use of plurals, E27, was most frequent, with a mean of 7.89 occurrences per protocol. Second most frequent category in this area was Response Specificity, G10 (mean of 4.37 occurrences).

TABLE 1

Frequently Occurring Rorschach Content Variables

VARIABLE	MEAN	MEDIAN	SD	RANGE
RESP	26.00	21.75	13.12	63
A1=ATOT	11.11	10.64	4.90	25
MTOT	9.86	8.00	6.98	50
E27	7.89	7.33	4.14	22
POPTOT	7.70	7.50	2.27	10
M2TOT	5.60	4.50	4.67	34
H1= HTOT	5.41	3.77	5.41	37
MATOT	4.41	4.14	2.95	18
G10	4.37	3.23	3.62	15
Z1TOT	4.26	3.50	3.31	17
C1	4.23	3.56	2.99	18
OBJTOT	3.46	2.31	3.08	15
MHTOT	3.23	2.44	3.54	28
AGTOT	2.89	2.23	3.39	24
M2A	2.57	2.04	2.24	12
E7	2.47	1.98	2.15	13
HdTOT	2.38	1.30	3.19	17

VARIABLE	MEAN	MEDIAN	SD	RANGE
E0	2.24	1.56	2.70	13
NATTOT	2.23	1.50	2.35	11
AdTOT	2.07	1.25	2.43	11
CLOTOT	1.93	1.41	2.10	13
ARTTOT	1.93	1.50	2.14	11
OBJ1	1.87	1.36	2.10	10
M1A	1.84	1.62	1.64	8
C2	1.78	1.32	1.75	7
M2H	1.71	1.29	2.05	16
HPTOT	1.70	1.22	1.85	9
PLTOT	1.66	1.18	1.81	9
M1H	1.52	1.08	1.83	12
CLO1	1.48	0.96	1.93	13
E28	1.42	1.13	1.43	7
AOBJTOT	1.41	1.30	1.05	5
M2	1.32	0.85	1.76	10
H2	1.22	0.83	1.70	10
AA6	1.22	1.14	1.02	5
E2	1.20	0.62	1.82	11

VARIABLE	MEAN	MEDIAN	SD	RANGE
AA25	1.16	0.81	1.36	6
AT1=ATTOT	1.07	0.81	1.17	5
E9	1.07	0.46	1.65	7
H3	1.07	0.50	1.44	7
ART1	1.06	0.66	1.37	6
Ad3	1.04	0.62	1.46	8
Hd2	1.03	0.42	1.81	9
BLSEXTOT	1.01	0.55	1.39	8

Other contextual categories occurring more than once per protocol in descending order were Negative Comments about Percept, E7 (mean of 2.47), Response Uncertainty, E0 (mean of 2.24), Indecisiveness in Response proper, E28 (mean of 1.42), Self Reference, E2 (mean of 1.20), and Phobic Comments, E9 (mean of 1.07).

In the color area, chromatic color, C1, occurred most frequently with a mean of 4.23 appearances per subject, while achromatic color, C2, occurred 1.78 times per protocol. No individual popular response occurred more than once per protocol, but popular responses tended to appear a mean of 7.70 times per subject.

Frequencies were derived both for specific movement categories (M1, M1A, M1H, M2, M2A, M2H, Ma) and for combinations of these categories. All but two of the individual and combined movement categories (M1, Ma) occurred one or more times per protocol. Frequencies for combined categories ranged from 3.23 for Total Human Movement (MHTOT) to 9.86 for Total Overall Movement (MTOT). Intermediate mean values for combined categories were Total Passive Movement (M1TOT), 4.26; Total Animal (MATOT), 4.41; and Total Active Movement (M2TOT), 5.60. The five frequently occurring individual movement categories clustered between one and three occurrences per sub-

ject. The most frequent movement category was Active Animal Movement, M2A, which appeared 2.57 times per protocol. Other frequently occurring movement responses and their mean values were Passive Animal Movement, M1A (1.84), Active Human Movement, M2H (1.71), Passive Human Movement, M1H (1.52), and Active Inanimate Movement, M2 (1.32).

Eleven of the frequent traditional content areas were included within the broad areas of Human or Animal responses. General Animal response (A1) appeared most often, with a mean of 11.11 occurrences per protocol. Animal Details occurred an average of 2.07 times per subject. In addition, three Animal subcategories occurred more than once per protocol. These were Butterfly, AA6 (1.22), Insect, AA25 (1.16), and Animal Head, Ad3 (1.04). General Human Response, H1, was the second most frequent traditional content category occurring an average of 5.41 times per subject. In addition, Human Detail and Human-like Percepts occurred frequently with means of 2.38 and 1.90 respectively. Three Human subcategories also occurred once or more per protocol. These were Female Human Content, H2 (1.22), Male Human Content, H3 (1.07), and Human Head, Hd2 (1.03).

In addition to various types of human and animal

content, 12 other areas of traditional content occurred frequently. These fell into eight general areas. Often, the overall broad category and one subcategory in an area occurred frequently, while other subcategories were fairly rare. These broad areas were Object, Art, Plant and Nature, Clothing, Aggression, Animal Object, Anatomy, and Blood and Sex. Overall Object (OBJTOT) occurred most frequently of these areas, 3.46 times per protocol with Residual Object (OBJ1) as the only frequent subcategory, occurring 1.87 times per protocol. Similarly, Overall Art (ARTTOT) occurred 1.93 times per subject, with one subcategory, Art 1, also appearing frequently (mean of 1.06). Overall Clothing occurred 1.93 times per subject with the subcategory Clo1 (all clothing except boots and shoes) occurring 1.48 times per protocol. Within the Plant-Nature area, Overall Nature (NATTOT) frequency was 2.23 and Overall Plant (PLTOT) frequency was 1.66.

The remaining four frequently occurring traditional content categories were Total Aggression (AGTOT), 2.89 occurrences per subject, Total Animal Object, AOBJTOT (mean of 1.41), Overall Anatomy, At1 (mean of 1.07), and combined Blood and Sex, BLSEXTOT (mean of 1.01). Finally total main and additional responses (RESP) averaged 26.00 per subject with a range of 63 and a standard deviation of 13.12.

If all content and context categories are looked at together, only 19 occur more than twice per subject. Animal occurs most frequently (11.11 times per protocol); Total Movement is second most frequent (mean of 9,86); Plurals is third (mean of 7.89); Total Populars is fourth (mean of 7.70); Total Active Movement is fifth (mean of 5.60), and Total Human is sixth most prevalent (mean of 5.41). The remaining thirteen in descending order are : Total Animal Movement, MATOT (mean of 4.41); Response Specificity, G10 (mean of 4.37); Total Passive Movement, M1TOT (mean of 4.26); Chromatic Color, C1 (mean of 4.23); Total Object, OBJTOT (mean of 3.46); Total Human Movement, MHTOT (mean of 3.23); Total Aggression, AGTOT (mean of 2.89); Active Animal Movement, M2A (mean of 2.57); Negative Percept Comments, E7 (mean of 2.47); Total Nature, NATTOT (mean of 2.23); Response Uncertainty, EO (mean of 2.24); and Total Animal Detail, AdTOT (mean of 2.07).

Experimental hypotheses were tested using the Mann-Whitney U Test (see Table 2). The Hypotheses that the well adjusted group would produce significantly more Human content responses and significantly fewer Anatomy and Sex responses than the poorly adjusted group were supported. However, the hypotheses that the well adjusted group would produce significantly fewer Blood

TABLE 2

Categories that Differentiate Among Groups

Variable	Test	Mean Ranks			p<
		Group 1	Group 2	Group 3	
HUMAN					
H1	M-U	23.82		37.18	.01
H1	K-W	31.73	53.57	51.20	.01
H3	M-U	24.65		36.35	.01
H3	K-W	35.07	48.68	52.75	.01
H4	M-U	24.30		36.70	.01
H4	K-W	37.17	43.98	55.35	.01
HC	M-U	27.00		34.00	.05
Hd4	M-U	27.10		33.90	.05
Hd4	K-W	38.68	49.05	48.77	.05
HP1	M-U	26.03		34.97	.01
HP1	K-W	37.60	47.73	51.17	.05

Variable	Test	Mean Ranks			p<
		Group 1	Group 2	Group 3	
ANATOMY					
AT1	M-U	37.98		23.02	.01
AT1	K-W	51.68	54.60	30.22	.01
AT3	M-U	38.03		22.97	.01
AT3	K-W	52.65	53.92	29.93	.01
SEX					
SEX1	M-U	35.55		25.45	.01
SEX1	K-W	54.25	43.30	38.95	.01

Variable	Test	Mean Ranks Group 1	Group 2	Group 3	p<
CONTEXT					
E37	M-U	36.72		24.28	.01
E37	K-W	54.75	45.77	35.98	.01
E3	M-U	27.97		33.03	.05
G10	M-U	24.92		36.08	.01
G10	K-W	33.72	52.16	49.15	.01
E4	K-W	43.57	50.98	41.95	.05
E4 (CORRECTED FOR RESP)	K-W	43.50	51.02	41.98	.05
RESP	K-W	36.45	60.37	39.68	.01

Variable	Test	Mean Ranks Group 1	Group 2	Group 3	$p<$
POPULARS					
P7	M-U	24.50		36.50	.01
P7	K-W	37.00	44.50	55.00	.01
P10	K-W	52.00	40.00	44.50	.05
ANIMAL					
AA6	M-U	34.87		26.13	.05
MOVEMENT					
MTOT	M-U	22.67		38.33	.01
MTOT	K-W	30.50	51.52	54.48	.01
M1TOT	M-U	25.60		35.40	.05

Variable	Test	Mean Ranks Group 1	Group 2	Group 3	p<
M2TOT	M-U	23.45		37.55	.01
M2TOT	K-W	31.97	51.25	53.28	.01
MHTOT	M-U	21.82		39.18	.01
MHTOT	K-W	31.83	46.48	58.18	.01
M2H	M-U	21.72		39.28	.01
M2H (corrected for resp)	M-U	24.75		36.25	.01
M2H	K-W	30.75	47.72	58.03	.01
M2H (corrected for resp)	K-W	36.62	44.93	54.95	.05
Ma	M-U	23.30		37.70	.01
Ma	K-W	34.42	45.48	56.60	.01

Variable	Test	Mean Ranks Group 1	Group 2	Group 3	p<
INTERACTION					
INTOT	M-U	26.42		34.58	.05
IN2	M-U	27.00		34.00	.05
AGGRESSION					
AG1	M-U	36.12		24.88	.01
AG1	K-W	54.53	44.12	37.85	.05
CLOTHING					
CLOTOT	M-U	24.93		36.07	.01
CLOTOT	K-W	37.33	45.25	53.92	.05

Variable	Test	Mean Ranks			p<
		Group 1	Group 2	Group 3	
CLO1	M-U	24.35		36.65	.01
CLO1	K-W	37.57	43.58	55.35	.05
FOOD					
FO	M-U	35.27		25.73	.01
FO	K-W	51.12	48.42	36.97	.05
PLANT					
PL1	M-U	27.50		33.50	.01
PL1	K-W	39.50	48.60	48.40	.05

Variable	Test	Mean Ranks Group 1	Group 2	Group 3	p<
GEOGRAPHY					
GEOTOT (corrected for resp)	K-W	39.87	54.57	42.07	.05

Note. M-U is the Mann Whitney U Test. K-W is the Kruskal Wallis Test. Group 1 is the poorly adjusted group. Group 2 is the intermediate group. Group 3 is the well adjusted group.

responses than the poorly adjusted group were not supported.

Not only did the well adjusted group produce significantly more general Human responses than the poorly adjusted group ($p < .01$), but the well adjusted group also tended to product significantly more of some specific subcategories of Human content than the poorly adjusted group. Thus, the well adjusted group produced more Male Human figures ($p < .01$), more Humans Engaged in Positive Happy Behaviors ($p < .01$), more Blacks or Natives ($p < .05$), more Hands, Fingers content ($p < .05$), and more of some kinds of Humanlike percepts ($p < .01$).

As reported earlier, the well adjusted group produced significantly fewer Anatomy responses than their poorly adjusted counterparts ($p < .01$). Within the broad area of Anatomy content, well adjusted individuals also tended to produce fewer Bony Anatomy responses ($p < .01$).

The two groups did not produce significantly differing quantities of Blood or Overall Sex responses. However, in one Sex subcategory, Residual Sex, poorly adjusted subjects did produce significantly more responses ($p < .01$). This category of responses included all sex content which is not associated with specific gender, is not personally referential, and does not overtly reflect

confusion about the sex of the percept.

In addition to testing experimental hypotheses, exploratory data analysis was conducted. Groups were compared on 71 individual content or context categories, and on 15 factors created by combining categories. For these data analyses, the Kruskall-Wallis Test was used to compare the three subject groups and the Mann-Whitney U Test was used for comparison of the two extreme groups (the well adjusted vs. the poorly adjusted). Analysis of 21 factors led to significant results (see Table 2).

In the use of contextual behaviors, subjects were found to differ significantly in four categories: Neutral Card Comments (E37), Unique Self Reference (E3), Surveillance (E4), and Response Specificity (G10). Significant differences were found both among all three groups ($p < .01$) and between the two extreme groups ($p < .01$) on the category of Neutral Card Comments with the poorly adjusted group tending to make most comments and the well adjusted group, the least. Significant results among ($p < .01$) and between groups ($p < .01$) were also found for Response Specificity. In this case, the poorly adjusted subjects tended to use the least response specificity, the well adjusted used significantly more than the poorly adjusted and the intermediate group used the

largest number of response specificity comments. For Unique Self Reference, the two extreme groups differed significantly ($p < .05$) with the well adjusted group showing more of this trait. In contrast, significant results were found only among the three groups on Surveillance ($p < .05$) with the intermediate group showing more of this behavior than either of the other groups.

Groups differed significantly on production of two specific popular responses, P7 (two people on Card III) and P10 (butterfly or bowtie on Card III). In both cases, the three groups differed significantly (for P7, $p < .01$: for P10, $p < .05$). For P7, the two extreme groups also differed significantly ($p < .01$). The poorly adjusted group tended to produce the fewest P7 responses while the well adjusted produced the most with the intermediate group falling between the two extremes in this category. For P10, the poorly adjusted group produced more of this response than either of the other groups which produced similar amounts of this variable.

Only one type of Animal content differentiated the two extreme groups. This content, Butterfly or Moth (AA6), was produced more frequently by the poorly adjusted group than the well adjusted group ($p < .05$).

Production of movement in responses differentiated among the three groups in five areas with the well adjusted group consistently producing the most Movement responses and the poorly adjusted group consistently producing the least. These categories were Total Movement, MTOT ($p < .01$); Total Active Movement, M2TOT ($p < .01$); Total Human Movement, MHTOT ($p < .01$); Active Human Movement, M2H ($p < .05$); and Dance, Ma ($p < .01$). These results are summarized in Table 2. In addition movement production differentiated between the two extreme groups in six movement categories. In this case, poorly adjusted subjects again consistently produced fewer Movement responses than the well adjusted subjects. These areas were Total Movement, MTOT ($p < .01$); Total Passive Movement, M1TOT ($p < .05$); Total Active Movement, M2TOT ($p < .05$); Total Human Movement, MHTOT ($p < .01$); Active Human Movement, M2HTOT ($p < .01$); and Dance, Ma ($p < .01$).

In addition to the significant differences in production of these specific Context, Popular, Animal, and Movement responses, subjects showed significant differences in production of responses in six other areas: Interaction, Aggression, Food, Plant, and Geography. The two extreme groups differed in production of Total Interaction responses ($p < .05$) and in production of the subcategory of Positive Interaction, IN2 ($p < .05$), with well

adjusted subjects producing significantly more of these responses than poorly adjusted subjects.

For Object of Aggression percepts, significant differences were found both among all three groups ($p < .05$) and between the two extreme groups ($p < .01$) with the poorly adjusted group developing the most of these responses, the well adjusted group producing the least, and the intermediate group in between the two others.

As was true for Object of Aggression, significant differences were found among the three and between the two extreme groups both for Food (FO) and for Residual Plant (PL1) contents. In the case of Food, comparison of the three groups suggested that the poorly adjusted group produced the largest number of Food responses, followed by the intermediate group and then the well adjusted group ($p < .05$). When the extreme groups were compared, poorly adjusted subjects produced significantly more Food responses than the well adjusted subjects ($p < .01$). For Residual Plant, three group comparison ($p < .05$) and extreme group comparison ($p < .01$) suggested that poorly adjusted subjects produce significantly less of this content than either of the other groups which showed equivalent performance in this area.

Th- final area in which groups differed significantly was Total Geography production (GEOTOT). The three groups differed significantly in this category ($p < .05$) with the intermediate group producing significantly more of this content than either of the two extreme groups which produced equivalent amounts of this content.

CHAPTER V

DISCUSSION

Because normative data gathered in this research differed from previous investigations, it must be viewed as initial findings which will require crossvalidation to assess significance. This is especially true because the sample used is small and represents a restricted subgroup of the general population. However, in spite of these factors, the data appear useful in three ways: provision of initial normative data, increased information about frequency of occurrence of specific subcategories, and some evidence that these norms may conform to previous research.

In some ways, provision of initial norms is the most important aspect of this study. Although clinicians apparently depend primarily on content in their interpretation of the Rorschach, research about norms for content and context has been limited in the past. Establishment of extensive, detailed norms could provide good foundation from which clinicians could move to interpretation of results. While these norms provide a good initial

step, there is need for extensive crossvalidation and use with varied populations to develop valid normative data.

In addition to providing normative data, the scoring scale also provides new information about specific subcategories which tend to occur frequently. Although, on the whole, subdivision of broad categories did not result in increased information, in a few cases subdivision into narrowly defined subcategories suggested that a specific subcategory appears to occur more frequently than others. Thus Human Male, Human Female, Human Head Animal Head, Butterfly, Insect, and nine types of movement all occurred more than once per protocol and more frequently than other subcategories of their relevant broad content areas. This suggests that further investigation of narrow categories might result in clearer expectations for frequency of occurrence of specific response types. This would provide valuable information for clinical use.

Finally, although this investigation provided only initial normative data, results suggest that these data conform to previous findings. There is little or no consistent research on the vast majority of the 260 categories studied. However, data from this investigation does conform to previous findings for the few categories stud-

ied in the past. Thus A was the most frequent traditional content category, followed by H. Total popular also fell within the six to eight response range predicted by previous research. This suggests that, in spite of its narrow definition, this sample may be fairly representative in Rorschach performance and thus, results with this sample may be generalizable to a broader population.

Many of the most frequent categories outside of A and H reflected some form of elaboration of the basic percept. The types of elaborative comments occurring frequently included movement, use of plurals, specificity of response, use of color, aggressive imagery, and comments showing negative feelings or uncertainty about the response. The frequency of occurrence of these elaborative areas suggests that further research into richness of response and elaboration might lead to norms in this area which would be relevant to clinical work.

Three of the four experimental hypotheses were at least partially supported by data analyses. These were that well adjusted subjects would produce more H, fewer Sex, and fewer At than poorly adjusted subjects. The final hypothesis, that well adjusted individuals would produce significantly fewer Blood responses than poorly

adjusted subjects was not supported. Not only did these data suggest significant differences for the broad categories, but, because each category was subdivided, it was also possible to see which specific subcategories differentiated between groups. Thus, in addition to supporting previous research about the general categories of Human, Anatomy and Sex, this data analysis provided information about specific subcategories which appear to differentiate between groups. This may lead to hypothesis generation for future research and would need to be crossvalidated to assess its usefulness for clinicians. If these results generalize to other populations, they would increase the clinician's ability to interpret and understand variations in production of more narrowly defined content than has been previously researched.

In previous research, production of H has been consistently associated with level of adjustment. Not only was this basic finding supported in the current project, but results also suggest that specific subcategories of H differentiate between groups, while others do not. Thus, well adjusted subjects tended to produce significantly more clearly identified male human, human percepts associated with happy, positive behavior, blacks or Africans, and more hand and finger detail responses. Not only quantity but quality of H responses differentiate between

groups.

As was true with H content, well adjusted and poorly adjusted subjects differed in the predicted direction for specific subcategories of the broad Sex and Anatomy contents. While the two groups did differ in overall At production, they also differed significantly in the subcategory of Bony Anatomy with the poorly adjusted individuals producing significantly more of these than their well adjusted counterparts. Phillips and Smith (1953) associate Bony Anatomy production with difficulty expressing hostility, specifically with prevention of acting on hostile impulses. Thus, these results might suggest that the poorly adjusted group is in conflict over hostile impulses but does not overtly express this conflict.

The two groups of subjects did not differ significantly in production of overall Sex responses, but differed only in production of nonspecific Sex responses, those not associated with gender or personal reference. Production of Sex responses is seen as reflecting conflict over sexual impulses. However, use of vague, non specific Sex responses might suggest, as is true with production of Bony Anatomy responses, avoidance of expression of the conflict and associated impulses.

In contrast to support found for the first three experimental hypotheses, no support was found for the hypothesis that poorly adjusted individuals would produce more Blood responses than well adjusted subjects. It was expected that, if as hypothesized, Blood reflects aggressive impulses, poorly adjusted subjects would be more likely than their well adjusted counterparts to produce these responses. Perhaps this hypothesis was not born out because Blood is a more overtly aggressive response than Anatomy. In their use of Sex, subjects tended to provide fairly bland responses, thus reducing the impact of the sexual material. Perhaps subjects produced limited numbers of these strong, impulse laden Blood responses for similar reasons.

Thus, results of experimental hypothesis testing suggested that well adjusted subjects tend to produce more general H responses and more of some specific types of H than poorly adjusted subjects. These types of response have been associated in previous research with healthy adjustment and empathic ability and would be expected to be associated with well adjusted subjects. Poorly adjusted subjects tended to produce specific Anatomy and Sex responses suggesting conflict over sexual and aggressive impulses combined with efforts to repress or avoid expression of these impulses. Further investiga-

tion and crossvalidation with other groups would be useful both to assess the generalizability of these findings and to establish specific patterns of content production shown by individuals from different diagnostic categories.

In addition to experimental hypothesis testing, data analysis was completed on 71 categories. The purpose of this was to gather initial data which might suggest areas for future exploration. In this exploratory data analysis, differences between well and poorly adjusted subjects appeared to fit in four general areas: differences in elaborative tendencies and maintenance of distance from the task; use of movement; projection of mood on the percept; and miscellaneous percepts.

Differences in performance of well and poorly adjusted subjects suggest that well adjusted subjects tend to be more detailed and involved in percept description while poorly adjusted subjects tend to remain uninvolved in the task and maintain distance. This involvement of well adjusted subjects is reflected in more frequent elaborative comments and more immersion in the percept. For example, well adjusted subjects tend to be more specific in responses than poorly adjusted subjects, often describing the specific breed of dog, genus of tree

or type of person. They tend to use more clothing which is likely to be an elaboration of a main human response. They also appear to immerse themselves more in the percept by describing it as though it is present and interacting with them. On the other hand, poorly adjusted subjects maintain distance from the percept by making more neutral card comments and comparing percepts with previous cards than the well adjusted group. They also are more likely to produce stereotypic butterfly responses and the popular of butterfly or bow tie on Card III. Well adjusted subjects tend to produce more popular H on Card III. Although this could be interpreted as reflecting stereotypy in the well adjusted group, it seems likely that this H production is related to the well adjusted group's tendency to exceed the poorly adjusted group in Human content production. These results suggest that well and poorly adjusted subjects differ in the amount of distance maintained from tasks with well adjusted subjects becoming more involved in percepts through elaboration and describing percepts as present while poorly adjusted individuals maintain distance as reflected in tendency to compare cards and use stereotypic images.

Production of Movement responses suggests that use of overall movement and of a wide range of specific types

of movement may differentiate between well and poorly adjusted subjects and also supports previous research indicating that production of Human Movement is related to adjustment and prediction of empathy and social maturity. Projection of life or action as Active, Passive or Inanimate Movement all discriminate between the two groups. In addition projection of Overall Human Movement and specifically Active Human Movement and Dance differentiate between groups. Thus use of movement appears to support previous research regarding significance of this factor as reflecting empathy and social maturity in responses. In addition to the extensive discrimination capacity and support for previous research, these results also conform to the previously suggested hypothesis that well adjusted subjects tend to elaborate more than their poorly adjusted counterparts on percepts. Well adjusted subjects produce significantly more responses both for Overall Movement and for five specific subareas of movement. This appears in part to reflect the tendency of well adjusted subjects to explain more fully and become more involved in percepts than poorly adjusted subjects.

The fact that projection of the movement subcategory, Dance on the card discriminates between groups appears related to another pattern of perception which discriminates between groups: attribution of mood or

affect on the card. Thus, the well adjusted group tends to produce more positively valenced percepts and comments: human percepts associated with positive activity; dancing; and interaction, especially positive interaction. On the other hand, poorly adjusted subjects tend to exceed their counterparts in production of percepts which are objects of aggression. To some extent, these results appear to support previous research by Urist (1977) and Elizur (1975). In his research, Urist hypothesized that the nature of relationships between percepts, whether animate or inanimate, reflects an individual's capacity for positive, harmonious relationships. This would suggest that production of interaction, especially of a positive nature, within the percept would reflect social maturity and level of adjustment; thus it would seem reasonable for the well adjusted individuals to produce more of these responses than the poorly adjusted subjects. Elizur's scale of hostility used a number of indices of aggression to measure hostility, one of which was "object of aggression." In the current research, other measures of aggression, similar to those on the Elizur scale (Aggressor, Dead, Symbol of Aggression) did not discriminate between extreme groups, while the Object of Aggression category did. Thus, there is support for the hypothesis that projection of aggression on the Ror-

schach reflects hostility and poor adjustment, but in this case, only one form of this projection appears to discriminate significantly. This discrimination between groups only by a passive indicator of hostility conforms to previously discussed findings about this sample. As noted, the tendency for poorly adjusted subjects to produce significantly more Bony Anatomy and undifferentiated Sex responses suggests repression of hostile, aggressive impulses and possibly a tendency to reduce potency of sexual images/impulses with bland, undifferentiated percepts. Within this context, it is not surprising that subjects would reveal hostility, but in a fairly passive form. In summary, it appears that an underlying aspect affecting content production is the tendency to attribute positive or negative aspects to the percept with well adjusted subjects more likely to see percepts in positive moods, positive interactions and behaviors while poorly adjusted subjects tend to atribute negative qualities and victimization to percepts.

In addition to areas reflecting involvement in the percept, movement, and attribution of mood to the percept, subjects performed significantly differently in four categories which did not fit together or seem to relate to the three broad patterns already described. These categories were Food, Plant, Geography, and Sur-

veillance imagery. Poorly adjusted subjects tended to produce more Food responses than their well adjusted counterparts. This finding appears reasonable when the hypothesized significance of Food is considered. According to Phillips and Smith (1953), Food production suggests unresolved dependency needs and is most likely to occur on children's protocols. Thus production of Food in this group suggests possible passive receptive orientation (also suggested by the type of Sex, Bony Anatomy, and Object of Aggression responses described elsewhere) and immaturity in contrast to the social maturity and empathy suggested by higher production of H and Human Movement by well adjusted subjects.

In contrast to the apparent pattern in factors previously described, the final three categories, Plant, Geography, and Surveillance appear to have no significance or to contradict patterns suggested by previously discussed results. Thus, well adjusted subjects tended to produce more Plant responses than poorly adjusted individuals. According to Phillips and Smith(1953) these responses suggest passivity, femininity and dependency. These hypotheses contradict previous patterns that indicate that the poorly adjusted group was more passive and dependent than well adjusted subjects. In the cases of Geography and Surveillance, the intermediate group tended

to produce more of these images than either of the other groups. Since the intermediate group is the most amorphous and heterogeneous of the three, it is hard to hypothesize whether these findings have any meaning. Further investigation of all three areas is needed.

Although the restricted type of the sample and exploratory nature of this investigation indicate that current results must be interpreted with care, there is evidence that norms established for this sample conform to findings of previous research. Thus, results for this sample may have some generalizability to other groups. The main impact of this investigaation, however, lies in its implications for future research in three areas: 1) future establishment of clinically relevant, detailed norms; 2)more complete research into areas for which there were previously no reliable measures, such as context and richness of response; and 3) delineation of patterns of content responses which differentiate between different groups of individuals. Extensive research in these areas will be necessary to establish valid, clinically useful norms and knowledge about response patterns. However, if this research is completed, it will provide clinicians with specific information about the use of content in the Rorschach and will encourage and permit

improved interpretation of Rorschach results in the clinical setting.

CHAPTER VI

SUMMARY

Over the past 30 years, substantial research has been conducted about the Rorschach Test, a widely used personality assessment technique. A significant portion of the research has focussed on the significance and patterns of occurrence of various types of content in subjects' responses to the Rorschach stimuli. This research has generally approached investigation of content from several perspectives: establishment of normative data; development and application of scales designed to measure personality variables; investigation of occurrence and significance of specific content categories; and investigation of the occurrence and significance of contextual behaviors. However, until this time, research has led to only limited normative information and conflicting data about significance of specific content categories. As a result, the goal of this investigation was to develop a reliable, detailed content category scoring system and apply it to an initial sample of subjects. Data gathered in this way was used to establish initial norms for this

age group and to investigate possible discrepancies in use of content and contextual behaviors between well adjusted and poorly adjusted subjects.

Data used in this research were archival and consisted of Rorschach protocols administered to a group of 90 seminarians in their first or second year of college. Data were coded by number and the identity of subjects was not known to the investigator. Subjects were divided into three groups: well adjusted, poorly adjusted, and intermediate. This assignment was based on MMPI performance and evaluation of subjects by faculty and counselors at their school.

Protocols were scored on content and contextual factors on a rating system developed specifically for this purpose. The development of the rating system consisted of several steps. The broad categories of context and content were based on previously developed analysis systems. Once established, however, these broad categories were subdivided as necessary to increase the precision of the rating scale in reflecting differences in content and contextual behaviors.

After development of the preliminary scale, interjudge reliability was established using the Cohen's Kappa Coefficient of Agreement. Interjudge reliability was

adequate for all but two of the 94 scores, with 85 scores at the .90 level or better. Although two scores, Response Uncertainty and Response Specificity, did not reach the .80 level, they were fairly close, at .78 and .75 respectively. These two categories were retained in the system, with the understanding that data for these scores would have to be interpreted with caution.

Once interjudge reliability was established, the 90 protocols were scored. Data gathered was used to establish initial norms for content and context, to test experimental hypotheses and for hypothesis generating exploration. There were four hypotheses tested: 1) Well adjusted subjects will produce more H responses than poorly adjusted subjects; 2) Poorly adjusted individuals will produce more At responses than well adjusted subjects; 3) Poorly adjusted subjects will produce more Sex responses than well adjusted subjects; and 4) Poorly adjusted subjects will produce more Blood responses than well adjusted individuals.

All results must be interpreted with care. First the restricted nature of the sample (male seminarians) and age of the data (collected in the early 1960's) suggest that norms and findings for this research may not be generalizable to other populations. In addition cross

validation of norms and further testing of hypotheses will be necessary to assess validity of the data.

Normative data gathered did conform to previous findings for the few categories consistently studied in the past. This suggested that, in spite of its narrow definition, this sample may perform in a way similar to other groups. Many of the most frequently occurring categories outside of A and H reflected elaboration of the basic percept.

Three of the four experimental hypotheses were at least partially supported. Well adjusted subjects produced more Human and fewer of some Anatomy and Sex responses than the poorly adjusted group. There was no significant difference in production of Blood responses between the two groups. In addition hypothesis testing and hypothesis generating exploration suggest three patterns of response that differentiate these groups. Thus, well adjusted subjects appear to be more specific, elaborate more, and become more involved in their percept than poorly adjusted individuals, while poorly adjusted subjects appear to maintain distance from the percept. Well adjusted subjects tend to project life, in the form of movement on the percepts more frequently than their poorly adjusted counterparts. It appears that a final

pattern of response which affects content production is the tendency to attribute positive or negative aspects to the percept with well adjusted subjects more likely to project positive mood, positive interaction and positive behavior, while poorly adjusted subjects tend to attribute negative qualities and victimization to percepts.

Thus data suggest specific types and patterns of responses which differentiate between well adjusted and poorly adjusted subjects. However, because results are drawn from a narrowly defined sample and are the initial findings for a newly developed scoring system, extensive crossvalidation and future hypothesis testing will be necessary both to establish valid normative data for different populations and also to specify categories and patterns of categories which differentiate between different populations of individuals.

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APPENDIX A

RORSCHACH CONTENT SCORING SYSTEM

This appendix describes the content scoring system developed for this research. The major portion of this section lists and defines the 260 categories used. In many cases there is no other definition than the category name (i.e. the category AA1 is simply defined as "BAT"). In these cases, the examiner should simply use this category any time this subject labels a percept as the content in question.

Each response should be scored for all relevant content components. Thus, if a response is fairly complex, there may be a number of content scores (VIII: Two red bears, or rats, or mountain lions scaling a mountain: A1;AA2,-M2A E28, E27, N5, C1, P23. or VIII: Two squirrels hanging onto a multicolored tree; holding on with their claws with rocks below them: A1, AA44 -M1A,BAL1, E27, P12, C1, N8).

Within each response, one part will be underlined and thus identified as the primary response segment. The primary segment will consist of the most emphasized noun content; relevant subcategories of that area; and movement, aggression, balance and interaction scores associ-

ated with the primary content. If no noun content is clearly emphasized, the first mentioned content will be defined as primary content (VIII:Two Squirrels hanging to a multicolored tree, holding on with their claws with rocks below them; A1, AA44 -M1A- BAL1 N8, P12, E27, C1: VII: Two indian girls staring at each other, feathers in hair; H1, H2, HA-M1H-IN1, P19, E27, AOBJ2).

CONTEXTUAL FACTORS AND ELABORATIVE COMMENTS.

E0 RESPONSE UNCERTAINTY, OR EVASIVENESS IN RESPONSE PROPER. Examples: "almost looks like," "could be a ," "looks like a x, I think," "might be an x," "perhaps a x," "I don't know, but it looks like a x." E0 may also be scored if the subject uses an evasive, delaying statement before producing a response. An example of this would be "looks like something, I'm not sure what" or similar statements delaying the response.

E28 INDECISIVENESS IN RESPONSE PROPER. Score when subject offers two precision alternatives in response proper; "A dog or a squirrel." Also score if subject offers one response in the response proper, but offers a precision alternative in the inquiry. To score this the alternative must be part of one scored response. For content scoring, use the most emphasized alternative or if that is unclear use first offered choice. Use this only for the main content. Do not use for context, color, movement or other elaborations of the basic percept. If a response is scored for E28, do not score it as E0.

E29 CARD REJECTION-RESPONSE PROPER. In response

proper, subject cannot generate a response.

E30 REJECTION OF A SPECIFIC SECTION OF THE CARD. On a specific response, Subject indicates he is unable to generate a response for a specific section of the card; "I can't make anything out of that." Subject may use that part of the blot in a percept in another response.

E13 TENDENCY TO REJECTION. 1. On inquiry, subject has trouble recalling response or says it is difficult to remember the response or appears surprised that he made that response; 2. Initial rejection of blot followed by a response; "I don't see anything on this one,..... well, maybe it is a x." 3. after one or more resposes, subject indicates that there is some other percept, but he can't see it; "There's something else there, but I can't think what." This will be scored as E13 whether or not subject eventually offers an additional percept.

E1 NEGATIVE SELF STATEMENTS. "I have no imagination." I haven't got my thinking cap on." "I hate to say it, but it's a x again."

E2 SELF REFERENCE. Subject refers percept to own experiences or beliefs. "I don't like them." "....like when I was a kid."

G13 SYMBOLISM. All symbolism other than that covered

by GC or GR.

GC COLOR SYMBOLISM.

GR RLEIGIOUS SYMBOLISM.

E7 NEGATIVE PERCEPT COMMENTS: 1. Comments that are demeaning or derisory, or indicate that subject is making fun of or minimizing percept: eg., describing percept as "icky, ludicrous, or silly." or 2. negative comment or elaboration of percept, especially in ways indicating percept has poor fit with reality: e.g., describing percept as "ugly, malformed, distorted, or out of proportion."

E9 PHOBIC RESPONSE. Response suggesting fear or painful emotional involvement: e.g. describing percept as "eerie, wierd, spooky, horrible, scarey, or nasty."

E8 POSITIVE COMMENT ABOUT PERCEPT. Subject describes percept either accroding to positive attributes ("pretty flowers; looks happy; seems gay; I like this one ") or indicates that he finds the percept to be a good fit to the blot ("This is a perfect butterfly shape").

E36 EXCLAMATION WHEN SEES CARD. "Wow look at this one."

E37 NEUTRAL CARD COMMENTS. Subject refers to

previous cards or responses, noting similarities etc.

E34 SPECIFIC REFERENCES TO COLOR, INDICATING REACTION TO COLOR. Generally this may appear separately from the description of the percept: e.g., "This is colorful." "Look at the different shades of blue." However, if the response clearly indicates reaction to color, it may be scored E34 in addition to C1 or C2. This would be in situations in which the subject specifically indicates the importance of color within the context of a response using color : e.g., "Wow a technicolor scene." "The colors are important here."

E23 SPECIFIC REFERENCE TO COLOR: DENYING ITS IMPORTANCE OR INDICATING DISCOMFORT WITH IT: "I didn't do anything with the color." "These don't seem to fit in." I had trouble making that fit in." If subject is also rejecting a specific section of the card, score E30. Can also score C1 or C2 if the subject uses color in addition to showing discomfort with it.

C1 SPECIFIC USE OF COLOR IN PERCEPT: (i.e. content scored FC, CF, or C).

C2 SPECIFIC USE OF ACHROMATIC COLOR IN PERCEPT: (i.e. content scored FC', CF', or C').

E17 SEES EXAMINER AS AUTHORITY FIGURE. Subject calls

examiner "Sir" or behaves in ways which indicate that he sees examiner as authority figure.

E16 POSITIVE STATEMENT ABOUT TEST: "This was fun." "I like these blots."

E19 SOLICITOUS, HELPFUL TO EXAMINER: "Am I talking too fast?" "Can you get this all down." "Gee it must be hard doing this all day." "You should have a secretary."

E18 EXPRESSED HOSTILITY OR ANGER TOWARDS EXAMINER.

E3 UNIQUE SELF REFERENCE: Subject describes percept as if it is actually present and interacting in some way with the subject. If percept is seen as looking, staring, or pointing at subject, however, score E4 instead of E3. "Someone coming at me." "An ape walking toward me."

E4 SURVEILLANCE: finger pointing; eyes seen alone in the percept, person staring (possibly at subject); something peeking through a curtain or other concealment.

E32 PERCEPT IS HIDDEN, OBSCURED; there is obstruction with the connotation of concealment. The percept can be hidden behind another animal, content, object, or simply behind a curtain.

G20 REFLECTION. Percept is described as reflected in water, a mirror or on another surface: e.g. "a bird

reflected in water."

G6 DENIAL, UNDOING: denial of movement, life, potency to a percept: e.g. "dead bisected dog, a cartoon," alligator, but it's not hungry; it won't bite."

G10 SPECIFICITY. Subject describes percept as a specific instance of the content category: "head of Kennedy," "mask of Orpheus;" a specific type of animal or other content. Thus, if subject sees a dog it would not be scored for G10, but if he identifies it as a Scotch Terrier, the response would be scored for G10. The same would be true if the subject identified a tree as an oak or a pine tree, or a map specifically as a map of Africa.

E27 PLURAL. If subject sees more than one of any content in a response, the response is scored for E27. A response can only be scored for E27 once.

G7 WORN, RAGGED, OLD. If subject describes percept in way that indicates that it is worn down, old or damaged, score for G7.

G8 FOSSILS, ANCIENT CONTENT. H, A, and other content associated with ancient or prehistoric times: e.g. Greek temple, dinosaur.

G17 YOUNG OF A OR H: e.g. children, puppies, baby

rabbits.

E10 CARD TURNING: any instance of turning, either by change in arrow (<,> etc) or by spiral on protocol indicating card turning. Also, if the first response to a card indicates that the card is not upright, score E10. If a response based on a rotated card is followed by a response with no orientation indicated (suggesting card is upright again), score E10. If after the response, but before the following response is listed on the protocol turning is indicated, record E10 for the earlier response. If a series of orientations are shown with arrows or a combination of arrows and a spiral culminating with a final orientation leading to a response or ending use of the card, count the series as one E10. For two spirals or one spiral and four or more arrows, score as two E10s.

E35 PART NOT WHOLE: score only when incompleteness has not been indicated by other scoring such as Ad or Hd: "tree limb," "petal of a flower."

E14 REFERENCE TO SOMETHING MISSING. Subject refers to the fact that some part is missing in the percept; it must be clear that the part has been lost. Human and Animal percepts will also always be scored for Hd and Ad: e.g. "It looks like it lost its head;" "a rug with some-

thing missing;" "a x with bits chipped off it."

E15 PERSEVERATIVE TENDENCY. Subject produces two or more in a row of a specific category, or is unable to think of a new response because his previous response stays on the subject's mind. Score E15 for each instance of repetition of a category; if the subject produces three bats in a row, score E15 on each of the second and third bats. However, do not score for E15 in additional responses.

G14 SYMMETRY. The subject verbally notes symmetry: e.g. "It's the same on both sides;" "The crease in the middle divides it;" "the mirror effect" (if referring to symmetry, rather than a reflection. If subject is referring to a reflection, score G20).

G9 ENTRANCE TO SOMETHING. This can include an entrance to a cave, a room or anything else.

E33 SUBJECT LAUGHS. Score once for each time that this is noted. Thus E33 can be scored more than once per response.

G19 EXTRATERRESTRIAL. Subject identifies any content as from another planet, another world, outer space or similar concepts.

ADD ADDITIONAL RESPONSE: response given during inquiry and scored by examiner as an additional response. Except for scoring these responses with ADD, score in the same way as main responses are scored.

G1 HANDS, PINCERS, CLAWS, HOOKS, FINGERS: Score G1 if subject sees these or similar contents and they are not connected to the body.

G21 NOT STIMULUS BOUND. Subject begins with a response then free associates; develops concept or concepts tangentially related, or sees color on an achromatic card, or develops a complex story or scenario connected with the percept.

POPULARS

P1 Butterfly, bat, bird, or beetle on Card I.

P2 Human figure (middle detail) on Card I.

P3 Insignia, emblem, or coat of arms on Card I.

P4 Two animals (black or black and red) on Card II.

P5 Two people on Card II (black or black and red).

P6 Rocket in white space on Card II.

P7 Two people on Card III (with card upright, black area).

P8. Face, using the whole or cut off whole on Card III.

P9 Insect for whole or cut off whole on Card III.

P10 Butterfly or bow tie for red on Card III.

P11 Man or giant for whole on Card IV.

P12 Monster, man-like creature, gorilla for whole on Card IV.

P13 Tree, nature, bushes on Card IV.

P14 Bat or butterfly for whole or cut off whole on Card IV.

P15 Fur skin for whole or cut off whole on Card IV.

P16 Bat, butterfly, or bird for whole or cut off whole on Card V.

P17 Animal skin for whole or cut off whole on Card VI.

P18 Totem pole for Card VI.

P19 Two people on Card VII with card upright.

P21 Bay, inlets, island, or map for Card VII

P22 Poodles for Card VII with card upright.

P23 Two animals for red details on Card VIII (can also be one animal reflected).

P24 Anatomy on Card VIII.

P25 Witches or people in orange detail of Card IX.

P26 Fountain or waterfall on Card IX.

P27 Human heads or Teddy Roosevelt's head in pink on Card IX.

P28 Eyes alone on Card IX.

P29 Two crabs, spiders, scorpions, lobsters or similar percepts for blue detail on Card X. Subject may still be scored for P29 if he or she only identifies one of the blue details as a popular percept.

P30 Rabbit head for green detail on Card X.

P31 Worms for green detail on Card X

HUMAN RESPONSES

H1 ALL HUMAN RESPONSES: including all H, Hd, (H), and (Hd). Use this score for any kind of human content.

H2 FEMALE HUMAN RESPONSES: use only when percept is explicitly identified as female.

H3 MALE HUMAN RESPONSES: use only when percept is explicitly identified as male.

H4 HUMANS ENGAGED IN POSITIVE, HAPPY BEHAVIORS: human percepts engaged in positive behaviors (e.g. dancing, singing, playing music) or who represent these things (e.g. dancer, musician, singer). If there are negative overtones to the percept, don't score.

SPECIFIC HUMAN RESPONSES

HA INDIANS

HB CLERGY: monk, priest, nun, etc.

HC BLACK, OR NATIVES, OR AFRICANS.

HD POPE

HUMAN DETAIL RESPONSES

Hd1 RESIDUAL Hd: All human detail responses not covered by the following specific subcategories of human detail responses.

Hd2 FACES, HEADS: can include body down to neck, but no further.

Hd3 ARMS, LEGS, FEET.

Hd4 HANDS, FINGERS.

Hd5 MOUTH.

Hd6 EYES.

HUMAN LIKE RESPONSES

(H)1 RESIDUAL HUMAN LIKE RESPONSES: all (H) responses not covered by the following specific (H) subcategories.

(H)2 POTENTIALLY THREATENING OR SCAREY (H): e.g., monster, abominable snowman.

(H)3 PLEASANT OR BENIGN (H): e.g., fairies or elves.

(H)4 STATUES.

(H)5 HYBRID: (H) percept which is a mixture of human with some other category of content, e.g. man with wings, or a being which is half man and half animal.

SPECIFIC HUMAN LIKE RESPONSES

(H)A WITCH.

(H)B ANGEL.

(H)C DEVIL.

(H)D GOD.

(H)E CHRIST.

(H)G SAINT.

(H)H CHERUB.

(H)I THE HOLY SPIRIT.

(H)J GHOST.

(H)K BIBLICAL FIGURE: e.g. Moses, Jacob, Cain.

ANIMAL RESPONSES

A1 ALL ANIMAL RESPONSES: Score for any animal percept. This should be used in addition to any scores for A, Ad, and (A).

A2 ANIMALS ASSOCIATED WITH POSITIVE, BENIGN ACTIVITIES: e.g. playing.

ANIMAL DETAIL RESPONSES.

Ad1 RESIDUAL ANIMAL DETAIL RESPONSES: score for all animal detail percepts not covered by the following specific subcategories.

Ad2 CLAWS.

Ad3 HEAD: to be scored for Ad3, percept may include head and neck, but no more.

Ad4 ARMS OR LEGS.

Ad5 MOUTH.

ANIMAL LIKE RESPONSES

(A)1 RESIDUAL ANIMAL LIKE RESPONSES: All (A) percepts not covered by the following specific subcategories. This includes mythical figures.

(A)2 UNPLEASANT, FRIGHTENING PERCEPTS: e.g. King Kong, gargoyle.

(A)3 STATUES, STUFFED ANIMALS, ENGRAVINGS.

(A)4 DISTORTED, HYBRID: animal percepts which are part one species and part a second species, e.g. a creature that is part lion, part dog.

(A)5 FUNNY, SILLY , OR PLEASANT ANIMAL LIKE PERCEPTS.

SPECIFIC ANIMAL CATEGORIES.

AA1 BAT.

AA2 BEAR.

AA3 BIRD.

AA4 BUFFALO, ELK, BISON, MOOSE.

AA5 BULL, STEER.

AA6 BUTTERFLY, MOTH.

AA7 CAT.

AA8 CHICKEN.

AA9 CLAM.

AA10 COW.

AA11 CRAB, CRAYFISH, LOBSTER, CRUSTACEANS.

AA12 CROCODILE, ALLIGATOR.

AA13 DEER, ANTELOPE.

AA14 DINOSAUR.

AA15 DOG

AA16 DUCK.

AA17 ELEPHANT.

AA18 FISH, SHRIMP.

AA19 FOX.

AA20 FROG.

AA21 GERM, AMOEBA, CELL.

AA22 GORILLA, APE.

AA23 HORNET, WASP, BEE.

AA24 HORSE.

AA25 INSECT, BUG, FLY.

AA26 JELLY FISH.

AA27 LION, MOUNTAIN LION, PANTHER, TIGER.

AA28 LIZARD.

AA29 MONKEY.

AA30 OCTOPUS.

AA31 PARASITE, LEECH, TAPEWORM.

AA32 PIG.

AA33 POSSUM, BEAVER, RACCOON, WEASEL, MUSKRAT, BADGER, OTTER, WOLVERINE, SKUNK.

AA34 RABBIT.

AA35 RAT.

AA36 RHINO.

AA37 RODENT, MOUSE.

AA38 ROOSTER.

AA39 SEA HORSE.

AA40 SHEEP, RAM.

AA41 SNAKE.

AA42 SNAIL.

AA43 SPIDER, TATANTULA, SCORPION.

AA44 SQUIRREL.

AA45 STING RAY, RAY FISH.

AA46 TURTLE.

AA47 WALRUS, SEA LION, SEAL.

AA48 WOLF, COYOTE.

AA49 WORM, CATERPILLAR.

ANIMAL OBJECT RESPONSES

AOBJ1 FUR SKIN: score for animal skin percept, or skinned animal if subject is referring only to the skin. Also score for specificity (G10) if subject identifies skin as from a specific kind of animal, e.g. a bear skin, skin of a cat. Also score as object of aggression (Ag1) only if percept is explicitly described as having been aggressed on, e.g. skin of a bear that was killed by a hunter; skin of a cat that was hit by a car.

AOBJ2 ALL OTHER ANIMAL OBJECTS: e.g. feathers in hair, wish bones.

MOVEMENT AND BALANCE

PASSIVE MOVEMENT OR POTENTIAL MOVEMENT:

In general, an unelaborated posture or stance that implies life, but has no explicit active movement component; it is often indicated by a sense of tension without actual movement, e.g., sitting, standing, lying; also includes movement that is simply a response to gravity or other forces and involves no clear action on the part of the percept, e.g., water dripping, leaf falling; also includes potential movement-percept is about to, has just completed, or has the capacity for active movement (a dog about to leap; a panther poised to spring; a man who has just sat down; a bird that flies). For fire content, score for passive movement if there is no elaboration of the concept and no reference to movement, burning, etc.; score for active movement if subject refers to flames, burning, etc. To score for passive movement, follow this basic definition, but specify type of content by using M1, M1A, or M1H.

M1 PASSIVE INANIMATE MOVEMENT: movement conforming to the passive movement definition for inanimate objects.

M1A PASSIVE ANIMAL MOVEMENT: movement conforming to the passive movement definition for animal content.

M1H PASSIVE HUMAN MOVEMENT: movement conforming to the passive movement definition for human content.

ACTIVE MOVEMENT

Active movement reflecting effort or energy of the percept: running, jumping, frowning, sneering, erupting, spouting.

M2 ACTIVE INANIMATE MOVEMENT: movement conforming to the definition of active movement for inanimate objects. For explosion content, score M2 if the explosion is in process.

M2A ACTIVE ANIMAL MOVEMENT: movement conforming to the definition of active movement for animal content.

M2H ACTIVE HUMAN MOVEMENT: movement conforming to the definition of active movement for human content. If Hd inanimate movement (for example, hair blowing) is used to elaborate a human movement percept (this will usually be active human movement), do not score additionally for the inanimate movement (two girls dancing, their hair whipping around them, would be scored M2H for active movement, but would not be scored for the movement of their hair --H1,H2-M2H). If there is human movement (in this

case, it will usually be passive human movement) and inanimate Hd movement which is not simply an elaboration of the human movement, then score for human movement, but also add a score on for the inanimate movement immediately following the human movement score (girls sitting with their hair blowing in the wind would be scored for passive human movement and for passive inanimate movement --H1, H2-M1H, M1.

Ma DANCING: score this in addition to an active movement score.

BAL1 PERCEPT DESCRIBED AS HANGING, CLINGING, OR PRECARIOUSLY BALANCED. Do not score for passive movement when scoring for BAL1.

AGGRESSION

AG1 OBJECT OF AGGRESSION: e.g. wounded or squashed; bleeding if unelaborated or clearly the result of being the object of aggression (mountain lion turned into a rug).

AG2 AGGRESSOR: percept attacking, stalking prey, colliding, kicking. If the percept is also wounded, score for object of aggression in addition to the aggressor score.

AG3 DEAD: Score if percept is explicitly identified as dead, or if from the description, the percept clearly must be dead.

AG4 SYMBOL OF AGGRESSION: e.g. knife, submarine, hideous monster floating, aggressive look, holding out hand in imitation of a gun, growling, teeth clenched, aggressive behavior with no focus or actual aggressive consequences.

OTHER CONTENT CATEGORIES.

CLOTHING

CL01 ALL CLOTHING EXCEPT THOSE COVERED BY THE FOLLOWING SUBCATEGORIES.

CLOA BOOTS.

CLOB SHOES.

PR1 PERSONAL ADORNMENT: personal decorative apparel, e.g. bracelet, bow, necklace.

INTERACTION

IN1 NEUTRAL INTERACTION: content in which percepts are described as interacting, but with no implication of positive or negative involvement e.g. looking at each other (but not simply facing each other or other concepts which indicate physical orientation, but not necessarily any interaction between percepts).

IN2 POSITIVE INTERACTION: percepts are described as

interacting with each other with a definite positive affect, or in a way that clearly reflects positive relationship; e.g. smiling at each other, playing with each other.

MISCELLANEOUS

EMB EMBLEM: insignia, coat of arms, and other objects which serve as symbols for something (crown, shield, boy scout badge)

MASK MASK: any kind of mask.

TE TEETH: score whenever it appears in response, even if it is part of a larger percept.

FI FIRE, FLAMES: if the percept is described as fire with no elaboration, score for passive movement (M1); if percept is described in terms of flames, burning, etc score for active movement (M2).

SM SMOKE: if smoke is described as rising, drifting, etc, use passive movement score (M1).

CL CLOUD: If cloud formation, do not score for plural (E27); however, if it is a cloud formation, and subject refers to clouds, score for E27.

EXPL EXPLOSION: this is any kind of explosion or eruption, including a jet stream, volcanic eruption, or exhaust of a rocket taking off (if exhaust of a rocket taking off is described only in terms of fire, score for

fire (FI), not explosion). If the explosion is in process, score for active movement (M2). Use symbol of aggression score (AG4) for explosion of a bomb or weapon.

BL BLOOD: if flowing or dripping, use passive movement score (M1); if spurting or bleeding, use active movement score (M2).

BU BURN.

ST STAIN.

PA PAINT: not as part of art, abstract art or a painting, but simply the substance, paint; e.g. paint spattered on the wall; somebody dropped a can of paint. If paint is dripping or was just spilled, use passive movement score (M1).

XRAY XRAY

X CROSSECTION: when subject describes percept as a crossection of a specific type of content.

FO FOOD

ARCHITECTURE

ARCH1 RESIDUAL ARCHITECTURE: all architecture not covered by the following subcategories.

ARCH2 BRIDGES OR ARCHWAYS.

ARCH3 DOMES.

ARCH4 TOWER: including windmills.

ART

ART1 PERCEPT SEEN AS EXAMPLE OF A TYPE OF ART FORM: but not as a specific work of art; e.g. a painting, a model of something, a statue, like in a movie, or like in a play. If subject identifies the percept as a painting or model of a specific person, but the percept is still not a specific work of art, score for ART1, and also score for G10 for specificity; e.g. a bust of president Kennedy would be scored for ART1 and G10.

ART2 CHARICATURE OR CARTOON: e.g. a cartoon of Beetle Bailey (this would also be scored G10 for specificity), a cartoon head.

ART3 ABSTRACT: a painting with no form, modern art, abstract painting. Do not score "an abstract picture of two men sitting," as ART3. Because this has form, it would be scored as ART1.

ART4 PHOTOGRAPH: a picture, snapshot, or photograph. This category is only used when the percept is clearly identified as a photograph.

ART5 SPECIFIC WORK OF ART: this can be a painting, statue, or other work of art, identified as a specific item, in general it must be identified by name (i.e. the Mona Lisa, Rodin's Thinker). In addition to ART5 also score for specificity (G10).

ART6 MYTH, FABLE, FAIRY TALE, ETC: percept is identified as a character from a myth, fairy tale, book, fable, play, folk tale, etc., e.g., the witch from Hansel and Gretel, Oedipus.

PAT GEOMETRICAL OR OTHER PATTERN.

GEOGRAPHY: If there is a conflict, use most emphasized concept.

GEO1 A GENERAL MAP.

GEO2 ISLAND OR ISLANDS.

GEO3 INLET, BAY AND/OR COASTLINE.

GEO4 TOPOGRAPHICAL MAP.

NATURE, LANDSCAPE AND PLANTS.

N1 RESIDUAL NATURE: all nature not covered by the following subcategories.

N2 WATER

N3 VOLCANO.

N4 SAND, SAND DUNES.

N5 HILL, MOUNTAIN.

N6 CRAG, CLIFF.

N7 FOREST.

N8 ROCK.

N9 CAVE.

N10 SUN, SUN RISE, SUNSET.

N11 STORM.

N12 ICE.

N13 CHASM, CANYON, CRATERS.

N14 DIRT, DUST, MUD

N15 SKY.

LS1 LANDSCAPE: percept is described as a view, scene, panorama, etc. If subject clearly indicates that he views the percept as a scene, score for LS1, if scoring is unclear, score for LS1, if there are four or more kinds of content within the percept.

LS2 AERIAL VIEW: e.g., view from plane.

PL1 RESIDUAL PLANTS: all plants not covered by the following specific subcategories.

PL2 TREE, BUSH.

PL3 FLOWER.

PL4 LEAF.

PL5 PLANT, CORAL, GRASS (no need to score for plural when subject uses grass percept).

PL6 SEED, BUD.

RELIGION

REL1 RESIDUAL RELIGION: all religious content not covered by specific subcategories.

REL2 EXOTIC, EASTERN RELIGIOUS FIGURES

REL3 EXOTIC, EASTERN RELIGIOUS OBJECTS, ARCHITECTURE, STATUES, ICONS, ETC.

REL4 JUDEO-CHRISTIAN RELIGIOUS FIGURES.

REL5 JUDEO CHRISTIAN RELIGIOUS OBJECTS, ARCHITECTURE, STATUES, ICONS, ETC.

ANATOMY

AT1 GENERAL ANATOMY: score for each anatomy.

AT2 VISCERAL ANATOMY: score in addition to AT1 for visceral anatomy.

AT3 BONY ANATOMY: score in addition to AT1 for bony anatomy.

SEXUAL CONTENT

SEX1 RESIDUAL SEX: all sex content other than that included by the other specific subcategories. Examples of this include pelvis, if gender is not specified, and describing a percept as naked.

SEX2 FEMALE SEXUAL CONTENT: e.g., female genitalia, breast, rump, private parts, vagina, buttocks, hips, feminine shape, female curves.

SEX3 MALE SEXUAL CONTENT: e.g., male genitalia, penis, balls, testicles, rump (when male gender is specified).

SEX4 PERSONAL REFERENCE: refers to own fantasy or experience in describing sexual quality of percept.

SEX5 ANDROGENOUS: confusion about sex of figures or giving them both masculine and feminine sexual characteristics.

OBJECT CONTENT

OBJ1 RESIDUAL OBJECT: all objects not covered by specific object subcategories.

OBJ2 DOMESTIC, DECORATIVE OBJECTS: e.g. furniture, vase, teapot plate, cooking pot, chair.

OBJ4 LIGHT, LAMP, CANDLE.

OBJ5 ROCKET, SPACESHIP, PLANE.

OBJ6 TOTEM POLE.

OBJ7 PARCHMENT, SCROLL.

OBJ9 WEAPON.

RESP TOTAL RESPONSES: the number of main and additional responses in the protocol.

APPENDIX B

FREQUENCY OF RORSCHACH CONTENT VARIABLES

Variable	Mean	Median	SD	Range
E0*	2.24	1.56	2.70	13
E28*	1.42	1.13	1.43	7
E29	0.09	0.05	0.29	1
E30	0.38	0.21	0.66	3
E13	0.40	0.26	0.60	2
E1	0.26	0.13	0.55	3
E2*	1.20	0.62	1.82	11
G13	0.21	0.09	0.61	4
GC	0.54	0.19	1.09	5
GR	0.03	0.02	0.18	1
E7*	2.47	1.98	2.15	13
E9*	1.07	0.46	1.65	7
E8	0.83	0.38	1.46	11
E36	0.16	0.07	0.47	3
E37	0.64	0.32	0.98	4
E34	0.77	0.40	1.20	7
E23	0.60	0.35	0.84	3
C1*	4.23	3.56	2.99	18

Variable	Mean	Median	SD	Range
C2*	1.78	1.32	1.75	7
E17	0.63	0.48	0.77	3
E16	0.02	0.01	0.15	1
E19	0.11	0.06	0.35	2
E18	0.06	0.02	0.28	2
E3	0.13	0.06	0.40	2
E4	0.14	0.06	0.44	2
E32	0.22	0.08	0.60	3
G20	0.22	0.09	0.58	3
G6	0.48	0.19	0.92	4
G10*	4.37	3.23	3.62	15
E27*	7.89	7.33	4.14	22
G7	0.69	0.36	1.00	5
G8	0.32	0.12	0.79	4
G17	0.52	0.38	0.67	3
E10	6.17	1.70	8.47	48
E35	0.61	0.23	1.23	6
E14	0.27	0.11	0.73	5
E15	0.50	0.26	0.80	3
G14	0.77	0.26	1.54	8

Variable	Mean	Median	SD	Range
G9	0.11	0.06	0.35	2
E33	0.87	0.38	1.49	9
G19	0.10	0.06	0.30	1
ADD	0.57	0.21	1.06	5
G1	0.38	0.14	0.91	5
G21	0.34	0.10	1.07	8
POPTOT*	7.70	7.50	2.27	10
P1	0.71	0.78	0.46	1
P2	0.10	0.06	0.30	1
P3	0.09	0.05	0.29	1
P4	0.42	0.36	0.50	1
P5	0.22	0.14	0.42	1
P6	0.08	0.04	0.27	1
P7	0.69	0.77	0.47	1
P8	0.03	0.02	0.18	1
P9	0.06	0.03	0.23	1
P10	0.19	0.12	0.39	1
P11	0.18	0.11	0.38	1
P12	0.27	0.18	0.44	1
P13	0.07	0.04	0.25	1

Variable	Mean	Median	SD	Range
P14	0.10	0.06	0.30	1
P15	0.21	0.13	0.41	1
P16	0.80	0.88	0.40	1
P17	0.60	0.67	0.49	1
P18	0.21	0.13	0.41	1
P19	0.51	0.52	0.50	1
P20	0.00	0.00	0.00	1
P21	0.06	0.03	0.23	1
P22	0.04	0.02	0.21	1
P23	0.73	0.82	0.44	1
P24	0.22	0.14	0.42	1
P25	0.09	0.05	0.29	1
P26	0.02	0.01	0.15	1
P27	0.04	0.02	0.21	1
P28	0.02	0.01	0.15	1
P29	0.63	0.71	0.48	1
P30	0.12	0.07	0.33	1
P31	0.18	0.08	0.53	1
H1= HTOT*	5.41	3.77	5.41	37
H2*	1.22	0.83	1.70	10

Variable	Mean	Median	SD	Range
H3*	1.07	0.50	1.44	7
H4	0.68	0.48	0.86	4
HA	0.23	0.14	0.45	2
HB	0.02	0.01	0.15	1
HC	0.22	0.14	0.42	1
HD	0.01	0.01	0.10	1
HdTOT*	2.38	1.30	3.19	17
Hd1	0.81	0.48	1.16	5
Hd2*	1.03	0.42	1.81	9
Hd3	0.14	0.08	0.38	2
Hd4	0.27	0.12	0.67	4
Hd5	0.01	0.01	0.10	1
Hd6	0.11	0.06	0.35	2
HPTOT*	1.70	1.22	1.85	9
HP1	0.39	0.16	0.90	5
HP2	0.29	0.15	0.62	4
HP3	0.09	0.04	0.32	2
HP4	0.16	0.08	0.42	2
HP5	0.13	0.07	0.37	2
HPA	0.19	0.10	0.45	2

Variable	Mean	Median	SD	Range
HPB	0.09	0.05	0.29	1
HPC	0.14	0.06	0.46	3
HPD	0.02	0.01	0.15	1
HPE	0.10	0.05	0.34	2
HPG	0.00	0.00	0.00	0
HPH	0.06	0.02	0.27	2
HPI	0.00	0.00	0.00	0
HPJ	0.02	0.01	0.15	1
HPK	0.02	0.01	0.15	1
A1=ATOT*	11.11	10.64	4.90	25
A2	0.13	0.06	0.40	2
AdTOT*	2.07	1.25	2.43	11
Ad1	0.77	0.36	1.19	6
Ad2	0.19	0.09	0.54	4
Ad3*	1.04	0.62	1.46	8
Ad4	0.01	0.01	0.10	1
Ad5	0.06	0.03	0.23	1
APTOT	0.74	0.48	0.92	3
AP1	0.21	0.12	0.46	2
AP2	0.31	0.17	0.57	2

Variable	Mean	Median	SD	Range
AP3	0.13	0.07	0.37	2
AP4	0.08	0.03	0.34	2
AP5	0.01	0.01	0.10	1
AA1	0.91	0.78	0.96	5
AA2	0.39	0.24	0.61	2
AA3	0.68	0.38	0.93	4
AA4	0.09	0.05	0.29	1
AA5	0.03	0.01	0.24	2
AA6*	1.22	1.14	1.02	5
AA7	0.26	0.14	0.51	2
AA8	0.03	0.02	0.95	9
AA9	0.11	0.01	0.95	9
AA10	0.06	0.03	0.23	1
AA11	0.48	0.36	0.60	2
AA12	0.08	0.04	0.27	1
AA13	0.07	0.04	0.25	1
AA14	0.01	0.01	0.10	1
AA15	0.59	0.33	0.82	3
AA16	0.06	0.03	0.23	1
AA17	0.22	0.11	0.58	4

Variable	Mean	Median	SD	Range
AA18	0.26	0.14	0.51	2
AA19	0.02	0.01	0.15	1
AA20	0.13	0.07	0.34	1
AA21	0.04	0.02	0.26	2
AA22	0.09	0.05	0.29	1
AA23	0.00	0.00	0.00	0
AA24	0.22	0.12	0.46	2
AA25*	1.16	0.81	1.36	6
AA26	0.02	0.01	0.15	1
AA27	0.24	0.14	0.48	2
AA28	0.08	0.04	0.27	1
AA29	0.10	0.06	0.30	1
AA30	0.07	0.04	0.25	1
AA31	0.03	0.02	0.18	1
AA32	0.10	0.06	0.30	1
AA33	0.17	0.09	0.40	2
AA34	0.36	0.21	0.59	2
AA35	0.04	0.02	0.21	1
AA36	0.06	0.03	0.23	1
AA37	0.12	0.07	0.33	1

Variable	Mean	Median	SD	Range
AA38	0.04	0.02	0.21	1
AA39	0.33	0.21	0.54	2
AA40	0.08	0.04	0.27	1
AA41	0.06	0.03	0.23	1
AA42	0.04	0.02	0.26	2
AA43	0.53	0.44	0.67	4
AA44	0.09	0.03	0.41	3
AA45	0.10	0.06	0.30	1
AA46	0.06	0.02	0.28	2
AA47	0.18	0.11	0.38	1
AA48	0.20	0.08	0.54	3
AA49	0.00	0.00	0.00	0
AOBJTOT*	1.41	1.30	1.05	5
AOBJ1	0.88	0.83	0.82	4
AOBJ2	0.53	0.40	0.67	3
MTOT*	9.86	8.00	6.98	50
M1TOT*	4.26	3.50	3.31	17
M2TOT*	5.60	4.50	4.67	34
MHTOT*	3.23	2.44	3.54	28
MATOT*	4.41	4.14	2.95	18

Variable	Mean	Median	SD	Range
M1	0.89	0.48	1.28	7
M1A*	1.84	1.62	1.64	8
M1H*	1.52	1.08	1.83	12
M2*	1.32	0.85	1.76	10
M2A*	2.57	2.04	2.24	12
M2H*	1.71	1.29	2.05	16
Ma	0.52	0.35	0.72	3
BAL	0.21	0.10	0.53	3
AGTOT*	2.89	2.23	3.39	24
AG1	0.79	0.40	1.29	8
AG2	0.98	0.46	1.56	9
AG3	0.36	0.17	0.71	4
AG4	0.77	0.50	1.06	6
CLOTOT*	1.93	1.41	2.10	13
CLO1*	1.48	0.96	1.93	13
CLOA	0.21	0.12	0.46	2
CLOB	0.24	0.13	0.50	2
PR	0.09	0.05	0.29	1
EMB	0.31	0.17	0.63	4
MASK	0.28	0.12	0.70	5

Variable	Mean	Median	SD	Range
TE	0.12	0.06	0.36	2
INTOT	0.82	0.62	0.96	4
IN1	0.53	0.28	0.85	4
IN2	0.29	0.18	0.52	3
FI	0.42	0.19	0.86	5
SM	0.26	0.12	0.57	3
CL	0.21	0.11	0.49	2
EXPL	0.36	0.21	0.59	2
BL	0.34	0.20	0.58	2
BU	0.03	0.02	0.18	1
ST	0.03	0.01	0.24	2
PA	0.10	0.05	0.34	2
XRAY	0.16	0.06	0.52	3
X	0.02	0.01	0.21	2
FO	0.44	0.23	0.82	5
ARCHTOT	0.57	0.24	0.97	5
ARCH1	0.26	0.13	0.58	3
ARCH2	0.08	0.04	0.27	1
ARCH3	0.04	0.02	0.21	1
ARCH4	0.18	0.08	0.55	4

Variable	Mean	Median	SD	Range
ARTTOT*	1.93	1.50	2.14	11
ART1*	1.06	0.66	1.37	6
ART2	0.44	0.19	0.89	5
ART3	0.17	0.08	0.48	3
ART4	0.02	0.01	0.15	1
ART5	0.10	0.04	0.40	3
ART6	0.14	0.06	0.46	3
PAT	0.06	0.03	0.23	1
GEOTOT	0.67	0.30	1.05	4
GEO1	0.29	0.15	0.58	3
GEO2	0.13	0.06	0.40	2
GEO3	0.16	0.08	0.45	3
GEO4	0.09	0.05	0.29	1
NATTOT*	2.23	1.50	2.35	11
N1	0.08	0.04	0.27	1
N2	0.63	0.35	0.93	4
N3	0.03	0.02	0.18	1
N4	0.06	0.03	0.23	1
N5	0.38	0.18	0.71	3
N6	0.10	0.05	0.34	2

Variable	Mean	Median	SD	Range
N7	0.11	0.05	0.41	3
N8	0.33	0.16	0.73	5
N9	0.07	0.04	0.25	1
N10	0.11	0.06	0.35	2
N11	0.04	0.02	0.21	1
N12	0.09	0.05	0.29	1
N13	0.09	0.04	0.32	2
N14	0.09	0.05	0.29	1
N15	0.02	0.01	0.14	1
LSTOT	0.41	0.19	0.78	4
LS1	0.33	0.15	0.70	4
LS2	0.08	0.04	0.27	1
PLTOT*	1.66	1.18	1.81	9
PL1	0.14	0.08	0.38	2
PL2	0.70	0.36	1.09	6
PL3	0.37	0.14	0.85	5
PL4	0.19	0.09	0.50	3
PL5	0.22	0.12	0.51	3
PL6	0.03	0.02	0.18	1
RELTOT	0.81	0.30	1.62	11

Variable	Mean	Median	SD	Range
REL1	0.10	0.04	0.48	4
REL2	0.09	0.03	0.39	2
REL3	0.08	0.04	0.27	1
REL4	0.36	0.15	0.74	3
REL5	0.19	0.08	0.60	4
AT1=ATTOT*	1.07	0.81	1.17	5
AT2	0.53	0.25	0.90	4
AT3	0.67	0.42	0.86	4
SEXTOT	0.67	0.33	1.19	8
SEX1	0.21	0.11	0.49	2
SEX2	0.29	0.15	0.58	3
SEX3	0.07	0.02	0.44	4
SEX4	0.02	0.01	0.21	2
SEX5	0.08	0.04	0.31	2
OBJTOT*	3.46	2.31	3.08	15
OBJ1*	1.87	1.36	2.10	10
OBJ2	0.68	0.36	0.98	4
OBJ4	0.23	0.13	0.50	3
OBJ5	0.23	0.12	0.54	3
OBJ6	0.21	0.12	0.44	2

Variable	Mean	Median	SD	Range
OBJ7	0.02	0.01	0.15	1
OBJ9	0.21	0.08	0.61	3
BLSEXTOT*	1.01	0.55	1.39	8
RESP*	26.00	21.75	13.12	63

Note. * indicates variables with a mean of one or more occurrences per protocol.

APPROVAL SHEET

The thesis submitted by Mary Esther Locke has been read and approved by the following committee:

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Professor, Department of Psychology
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The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

March 2, 1983 — Date

Frank Kobler — Director's Signature